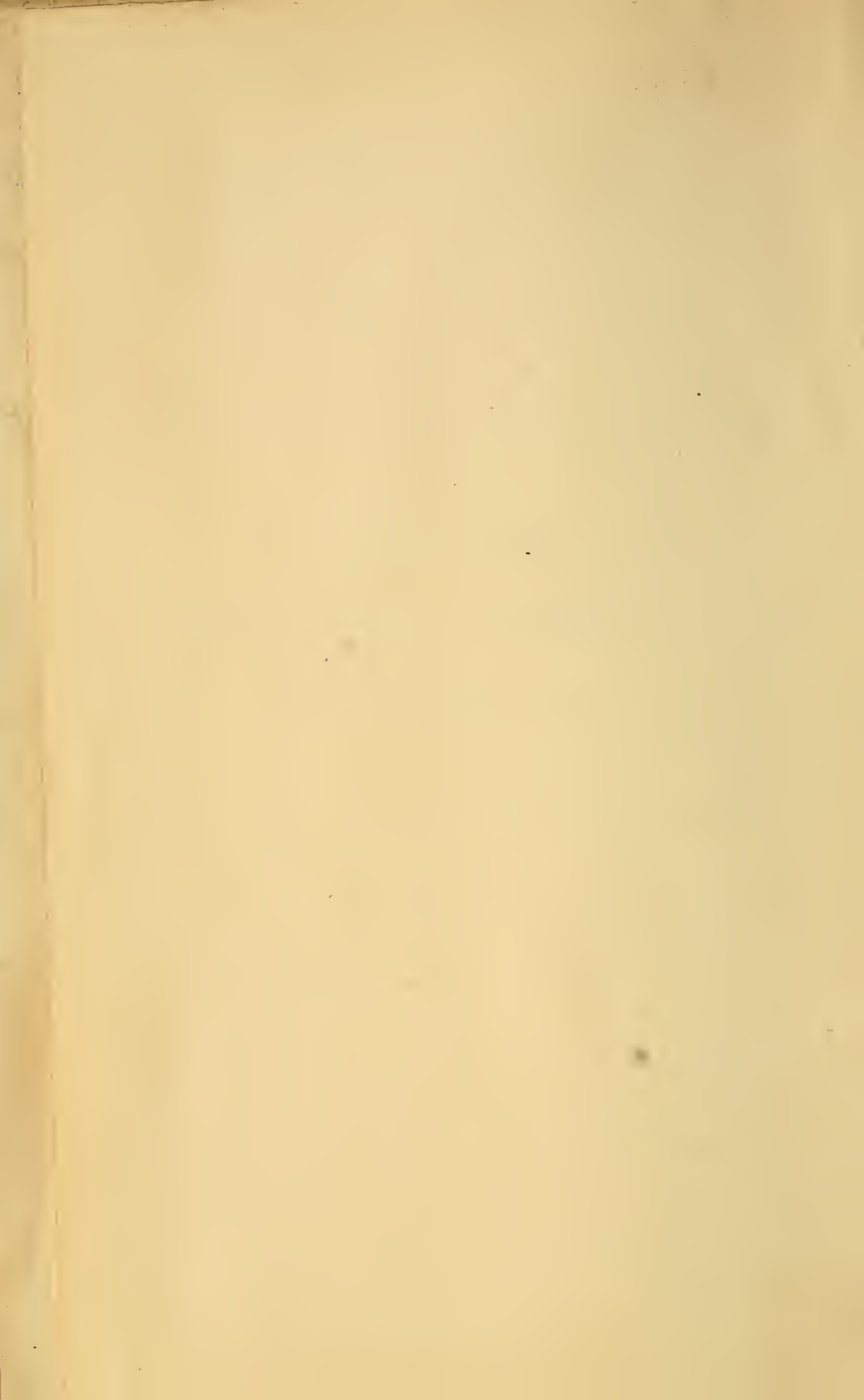



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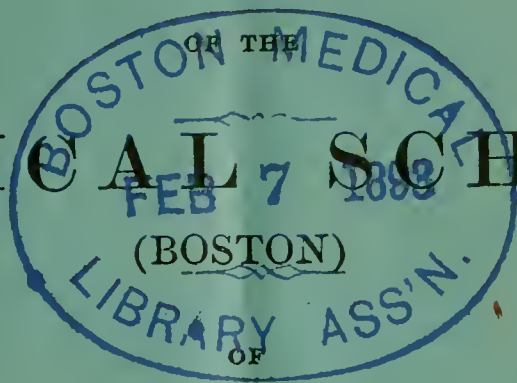
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ONE HUNDRED AND SEVENTH
ANNUAL CATALOGUE

MEDICAL SCHOOL



HARVARD UNIVERSITY.

1889-90.

[Reprinted from the Catalogue of the University.]



CAMBRIDGE, MASS.
PUBLISHED BY THE UNIVERSITY.

1889.

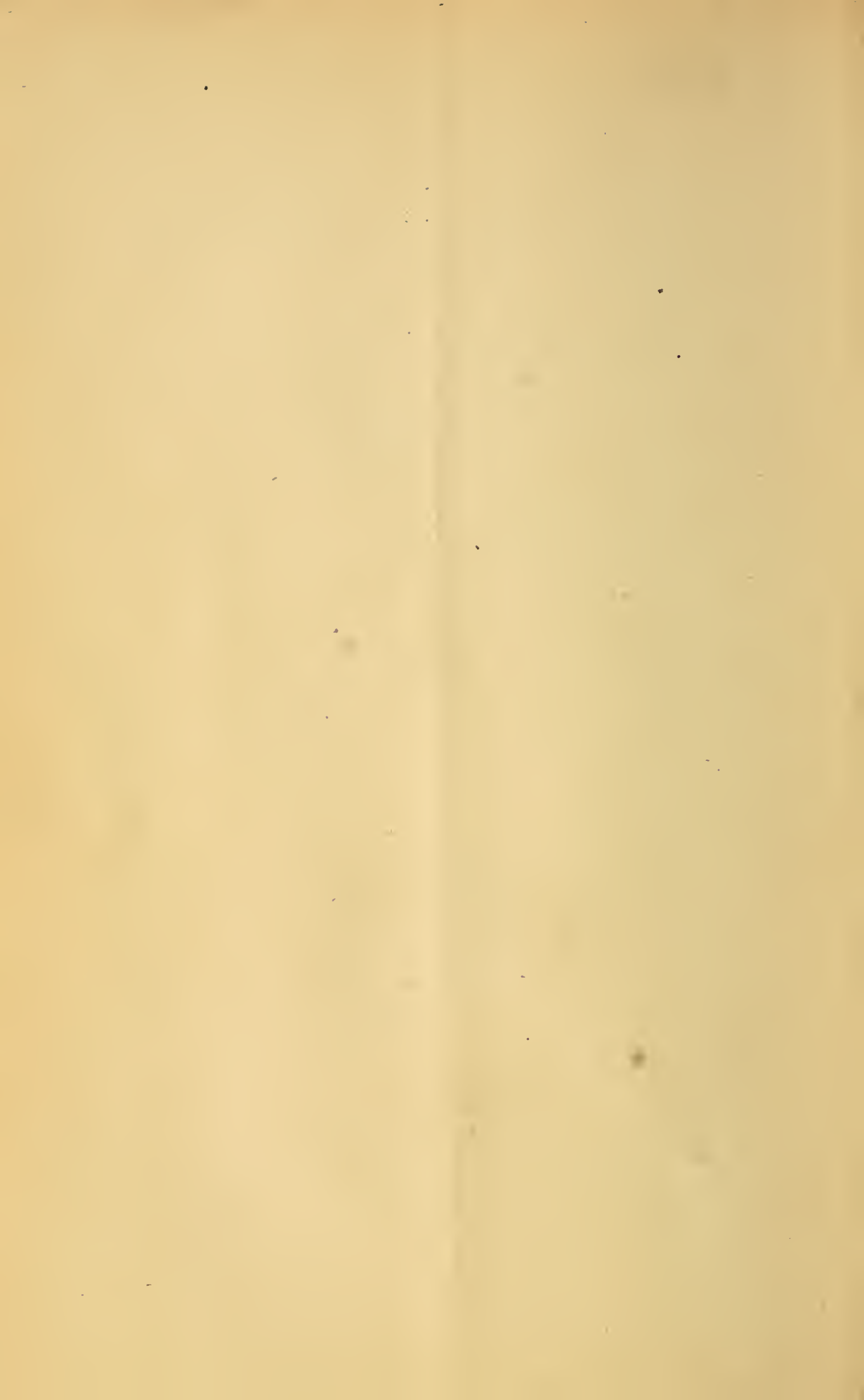


ONE HUNDRED AND SEVENTH
ANNUAL CATALOGUE
OF THE
MEDICAL SCHOOL
(BOSTON)
OF
HARVARD UNIVERSITY.
1889-90.

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CAMBRIDGE, MASS.
PUBLISHED BY THE UNIVERSITY.
1889.



THE MEDICAL SCHOOL.

BOSTON.

Instruction in this School is given by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed throughout the academic year. The year begins on the Thursday following the last Wednesday in September,* and ends on the last Wednesday in June. There is a recess at Christmas, beginning December 23, and ending January 2; and a spring recess, beginning on the Wednesday before Fast Day, and ending on the following Tuesday, inclusive.

The course of instruction has been greatly enlarged, and is so arranged as to carry the student progressively and systematically from one subject to another, in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory-work is substituted for, or added to, the usual didactic lectures, and is as much required of every student as attendance at lectures and recitations.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent in all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course, and have passed a satisfactory examination in the studies of the same.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the three and four year's period of study, a series of written and oral examinations on all the main subjects of medical instruction has been distributed for regular students through their entire course of study. Every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction, at some time during his period of study.

* That the time of study shall count as a full term, students of every class must present themselves within the first week of the term and register their names with the Secretary.

CALENDAR.

The meetings of the PRESIDENT AND FELLOWS are held on the second and on the last Monday of every month.

1889.

- Sept. 26, Thursday.* **Academic Year begins** in all departments of the University.
- Oct. 9, Wednesday.* Stated Meeting of the Board of Overseers.
- Oct. 16, Wednesday.* Stated Meeting of the Academic Council.
- Nov. 30, Saturday.* Last day for receiving applications for aid from the Loan Fund.
- Dec. 18, Wednesday.* Stated Meeting of the Academic Council.

RECESS FROM DEC. 23, 1889, TO JAN. 2, 1890, INCLUSIVE.

1890.

- Jan. 8, Wednesday.* Stated Meeting of the Board of Overseers.
- Jan. 10, Friday.* Applications from Graduate Students for admission to examination for any degree should be made before this date. See p. 300.
- Jan. 30, Thursday.* Second half-year begins in the Medical School.
- Feb. 10, Monday.* **Second half-year begins** (except in the Medical School).
- Feb. 19, Wednesday.* Stated Meeting of the Academic Council.
- Feb. 22, Saturday.* Washington's Birthday; a holiday.
- March 31, Monday.* Last day for receiving applications for all Graduate Fellowships and Scholarships, and for College Scholarships to be assigned to Graduate Students.
- March 31, Monday.* Last day for re-engaging College Rooms for 1890-91.
- April 1, Tuesday.* Last day for receiving applications of candidates for Second-Year Honors.

RECESS FROM THE WEDNESDAY BEFORE FAST DAY TO THE FOLLOWING TUESDAY INCLUSIVE.

- April 2, Wednesday.* Last day for receiving dissertations for the Boylston Medical Prizes.
- April 9, Wednesday.* Stated Meeting of the Board of Overseers.
- April 23, Wednesday.* Last day for receiving names of competitors for the Boylston Prizes.

- May 1, Thursday.* Last day for receiving applications for Price Greenleaf Aid for 1890-91.
- May 1, Thursday.* Last day for receiving dissertations for the Toppan, Dante, Sargent, and Sumner Prizes.
- May 1, Thursday.* Last day for receiving theses of Candidates for the degree of Ph.D. or S.D. See p. 303.
- May 3, Saturday.* Last day for receiving applications for College Rooms for 1890-91.
- May 3, Saturday.* Assignment of College Rooms for 1890-91.
- May 8, Thursday.* Speaking for the Boylston Prizes.
- May 14, Wednesday.* Stated Meeting of the Academic Council.
- May 28, Wednesday.* Last day for receiving applications for College Scholarships, and for aid from the Beneficiary Fund.
- May 30, Friday.* Memorial Day; a holiday.
- May 31, Saturday.* Last day for receiving applications of Professional Students who wish to be candidates for the degree of A.M. with a professional degree. See p. 303.
- June 3, Tuesday.* Examinations in the Medical School begin.
- June 9, Monday.* Examinations in the Dental School begin.
- June 19, Thursday.* Stated Meeting of the Academic Council.
- June 20, Friday.* Seniors' Class Day.
- June 24, 26-28, Tuesday to Saturday.* Examinations for admission to Harvard College, and to the Lawrence Scientific School.
- June 25, Wednesday.* **Commencement.** Stated Meeting of the Board of Overseers.

SUMMER VACATION OF THIRTEEN WEEKS, FROM COMMENCEMENT DAY TO SEPTEMBER 25.

- June 26, Thursday.* Examinations for admission to the Law and Medical Schools.
- June 30, Monday.* Summer courses in Field Engineering and Physical Training open.
- July 2, Wednesday.* Summer course in Botany opens.
- July 7, Monday.* Summer courses in Chemistry and French open.
- July 9, Wednesday.* Summer course in Physics opens.
- Sept. 18-20, 22, Thursday to Monday.* Examinations for admission to Harvard College, and to the Lawrence Scientific School.
- Sept. 22, Monday.* Examinations in the Dental School begin.

<i>Sept. 22, Monday.</i>	Examination for admission to the Dental School.
<i>Sept. 23, Tuesday.</i>	Examinations in the Medical School begin.
<i>Sept. 24, Wednesday.</i>	Annual Meeting of the Board of Overseers.
<i>Sept. 25, Thursday.</i>	Academic Year begins in all departments of the University.
<i>Sept. 25, Thursday.</i>	Examination for admission to the Law School.
<i>Sept. 25, 26, Thursday and Friday.</i>	Examination for admission to advanced standing in the Law School.
<i>Oct. 8, Wednesday.</i>	Stated Meeting of the Board of Overseers.
<i>Oct. 15, Wednesday.</i>	Stated Meeting of the Academic Council.
<i>Oct. 31, Friday.</i>	Last day for receiving applications of Candidates for Final Honors in 1891. See p. 143.
<i>Nov. 1, Saturday.</i>	Last day for receiving dissertations for the Bowdoin and Chauncey Wright Prizes.
<i>Nov. 1, Saturday.</i>	Last day for receiving applications for the Bright and Bigelow Scholarships.
<i>Dec. 1, Monday.</i>	Last day for receiving applications for aid from the Loan Fund.

ABBREVIATIONS.

C.	College House.	H'y.	Holworthy Hall.
D.	Divinity Hall.	M.	Matthews Hall.
D. H.	Divinity House.	S.	Stoughton Hall.
F.	Foxcroft House.	T.	Thayer Hall.
G.	Grays Hall	W.	Weld Hall.
H.	Hollis Hall.	W. H.	Walter Hastings Hall.
H'ke.	Holyoke House.		

NOTE. — Dormitories within the College grounds are known as Halls; those outside the College grounds, but owned by the University, are called Houses; while others, the property of private owners, are called Blocks or Buildings.

1889.

JULY.

Su	Mo	Tu	W	Th	Fr	Sa
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1890.

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JULY.

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OCTOBER.

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DECEMBER.

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THE MEDICAL SCHOOL.

FACULTY.

- CHARLES W. ELIOT, LL.D., *President.*
HENRY P. BOWDITCH, M.D., *Dean, and Professor of Physiology.*
FRANCIS MINOT, M.D., *Hersey Professor of the Theory and Practice of Physic.*
HENRY W. WILLIAMS, M.D., *Professor of Ophthalmology.*
DAVID W. CHEEVER, M.D., *Professor of Surgery.*
JAMES C. WHITE, M.D., *Professor of Dermatology.*
CLARENCE J. BLAKE, M.D., O.M., *Professor of Otology.*
FRANK W. DRAPER, M.D., *Professor of Legal Medicine.*
FREDERICK I. KNIGHT, M.D., *Clinical Professor of Laryngology.*
CHARLES B. PORTER, M.D., *Professor of Clinical Surgery.*
J. ORNE GREEN, M.D., *Clinical Professor of Otology.*
J. COLLINS WARREN, M.D., *Associate Professor of Surgery.*
REGINALD H. FITZ, M.D., *Shattuck Professor of Pathological Anatomy.*
WILLIAM L. RICHARDSON, M.D., *Professor of Obstetrics.*
THOMAS DWIGHT, M.D., LL.D., *Parkman Professor of Anatomy.*
EDWARD S. WOOD, M.D., *Professor of Chemistry.*
FREDERICK C. SHATTUCK, M.D., *Jackson Professor of Clinical Medicine.*
WILLIAM H. BAKER, M.D., *Professor of Gynaecology.*
T. M. ROTCH, M.D., *Assistant Professor of Diseases of Children.*
WILLIAM B. HILLS, M.D., *Associate Professor of Chemistry.*
WILLIAM F. WHITNEY, M.D., *Secretary and Acting Dean, and Curator of the Anatomical Museum.*
CHARLES S. MINOT, S.D., *Assistant Professor of Histology and Embryology.*
MAURICE H. RICHARDSON, M.D., *Assistant Professor of Anatomy.*
FRANCIS H. WILLIAMS, M.D., *Assistant Professor of Therapeutics.*
SAMUEL J. MIXTER, M.D., *Demonstrator of Anatomy.*
CHARLES HARRINGTON, M.D., *Instructor in Materia Medica and Hygiene, and Assistant in Chemistry.*

OTHER INSTRUCTORS.

- THEODORE W. FISHER, M.D., *Lecturer on Mental Diseases.*
SAMUEL H. DURGIN, M.D., *Lecturer on Hygiene.*
HENRY P. QUINCY, M.D., *Instructor in Histology.*
AMOS L. MASON, M.D., *Instructor in Clinical Medicine.*
FRANCIS A. HARRIS, M.D., *Demonstrator of Medico-legal Examinations.*
JAMES J. PUTNAM, M.D., *Instructor in Diseases of the Nervous System.*
ELBRIDGE G. CUTLER, M.D., *Instructor in the Theory and Practice of Physic.*
EDWARD H. BRADFORD, M.D., *Instructor in Surgery and Orthopedics.*
EDWARD M. BUCKINGHAM, M.D., *Assistant in Diseases of Children.*
FRANCIS H. DAVENPORT, M.D., *Assistant in Gynaecology.*
GEORGE M. GARLAND, M.D., *Instructor in Clinical Medicine.*
JOSEPH W. WARREN, M.D., *Instructor in Physiology.*
WILLIAM W. GANNETT, M.D., *Instructor in Pathology and Auscultation.*
CHARLES M. GREEN, M.D., *Instructor in Obstetrics.*
CHARLES F. WITHINGTON, M.D., *Assistant in Clinical Medicine.*
WILLIAM C. EMERSON, M.D., *Assistant in Chemistry*
GEORGE H. MONKS, M.D., *Assistant in Operative Surgery.*
HERBERT L. BURRELL, M.D., *Demonstrator of Surgical Appliances.*
HAROLD C. ERNST, M.D., *Instructor in Bacteriology.*
CHARLES P. STRONG, M.D., *Assistant in Gynaecology.*
ROBERT W. GREENLEAF, M.D., *Assistant in Histology and Embryology.*
THOMAS F. SHERMAN, M.D., *Assistant in Diseases of Children.*
HERMAN F. VICKERY, M.D., *Assistant in Clinical Medicine.*
OTIS K. NEWELL, M.D., *Assistant Demonstrator of Anatomy.*
WILLIAM M. CONANT, M.D., *Assistant in Anatomy.*
JOHN C. MUNRO, M.D., *Assistant in Anatomy.*
EDWARD REYNOLDS, M.D., *Assistant in Obstetrics.*
CHARLES W. TOWNSEND, M.D., *Assistant in Obstetrics.*
CHARLES L. SCUDDER, M.D., *Assistant in Clinical Surgery.*
CHARLES P. WORCESTER, M.D., *Assistant in Chemistry.*

The following gentlemen will give special clinical instruction :—

JOHN HOMANS, M.D., *in the Diagnosis and Treatment of Ovarian Tumors.*

EDWARD COWLES, M.D., *in Mental Diseases.*

FRANCIS B. GREENOUGH, M.D., and ABNER POST, M.D., *in Syphilis.*

OLIVER F. WADSWORTH, M.D., *in Ophthalmoscopy.*

O. W. DOE, M.D., and JOHN W. ELLIOT, M.D., *in Gynaecology.*

GEORGE W. GAY, M.D., *in Surgery.*

ARTHUR T. CABOT, M.D., and FRANCIS S. WATSON, M.D., *in Genito-urinary Surgery.*

GEORGE H. TILDEN, M.D., *in Dermatology and Syphilis.*

FRANKLIN H. HOOPER, M.D., *in Laryngology.*

GEORGE L. WALTON, M.D., and PHILIP C. KNAPP, M.D., *in Diseases of the Nervous System.*

STUDENTS.

IN COURSES FOR GRADUATES.

1888-89.*

Chase, Heman Lincoln, M.D.	<i>Brookline.</i>
Clark, Horace, M.D.	<i>Newton.</i>
Clark, Joseph Eddy, M.D.	<i>Medford.</i>
Cleveland, Charles Luther, A.B., M.D.	<i>Cleveland, O.</i>
Cushing, Ira Barrows, M.D.	<i>Brookline.</i>
Foley, James Leslie, L.R.C.P. (Lond.),	<i>Boston.</i>
Greene, Edward Miller, A.B., M.D.	<i>Boston.</i>
Lee, Daniel David, M.D.V.	<i>Jamaica Plain.</i>
Martin, Stephen Crosby, M.D.	<i>Roxbury.</i>
Michinard, Paul, M.D.	<i>New Orleans, La.</i>
Millet, Charles Sumner, M.D.	<i>Bridgewater.</i>
Moncrieff, David Scott, L.R.C.P. (Edin.), L.R.C.S.	
(Edin.),	<i>Boston.</i>
Peirson, Edward Lawrence, A.B., M.D.	<i>Salem.</i>
Ring, Charles Augustus, M.D.	<i>Portland.</i>
Russell, Alverly Claude H., M.D., Surg. U. S. N.	<i>Fort Valley, Ga.</i>
Stanhope, Alvin Hatch, M.D.	<i>Tewksbury.</i>
Trumbull, Frederick Moncrieff, PH.B., M.D.	<i>Boston.</i>
Tucker, Greenleaf Robinson, S.B.	<i>Boston.</i>

1889-90.

Ahearne, Cornelius Augustus, M.D.	<i>Lynn.</i>
Broughton, Henry White, A.B., M.D.	<i>Jamaica Plain.</i>
Burr, Alexander, M.D.V.	<i>Brighton.</i>
Cahill, Charles Sumner, M.D.	<i>Cambridgeport.</i>
Durrell, Thomas Moulton, M.D.	<i>Somerville.</i>
Freeman, Franklin Willard, M.D.	<i>Newton Lower Falls.</i>
Gerry, Edwin Peabody, M.D.	<i>Jamaica Plain.</i>
Goodell, George Zinn, M.D.	<i>Salem.</i>
Harding, George Franklin, M.D.	<i>Boston.</i>
Hubbard, Frank Allen, A.B., M.D.	<i>Taunton.</i>
Johnson, Matthias, M.D.	<i>Red Wing, Minn.</i>
McIntire, Herbert Bruce, M.D.	<i>Cambridge.</i>
McLennan, Roderick, M.D.	<i>So. Quincy.</i>
Mansfield, Francis, A.B., M.D.	<i>Taunton.</i>
Marion, Horace E., M.D.	<i>Allston.</i>
Parsons, Ralph Alfred, M.D.	<i>W. Roxbury.</i>

* After the issue of the Catalogue.

Sherman, William Sprague, M.D.	<i>Newport, R. I.</i>
Terry, Charles Church, M.D.	<i>Fall River.</i>
Thorndike, Augustus, A.B., M.D.	<i>Boston.</i>
Webster, George Arthur, M.D.	<i>Boston.</i>

FOURTH CLASS.

Beaumont, William Shepard,	<i>Jamaica Plain.</i>
Burns, Edward Lewis,	<i>Somerville.</i>
Carpenter, Irving Lloyd,	<i>Manchester, N. H.</i>
Carroll, Francis Edward, A.B. (<i>Fordham Coll.</i>).	<i>Boston.</i>
Churchill, Frank Spooner, A.B. 1886,	<i>Milton.</i>
Crafts, Leo Melville, L.B. (<i>State Univ. of Minn.</i>) 1886,	<i>Minneapolis, Minn.</i>
Deal, Edward Elvin,	<i>E. Boston.</i>
Forrest, Lawrence Francis,	<i>Cambridge.</i>
Huddleston, John Henry, A.B. 1886,	<i>Boston.</i>
Jelly, Arthur Carlton, A.B. 1881,	<i>Boston.</i>
Jenkins, Thomas Lincoln,	<i>Revere.</i>
Kaan, George Warton,	<i>Somerville.</i>
Keleher, Francis Joseph, A.B. (<i>Boston Coll.</i>) 1886,	<i>Boston.</i>
Kingsley, George Lyle, A.B. (<i>Yale Univ.</i>) 1886,	<i>Rome, N. Y.</i>
McCarthy, Thomas Horatio,	<i>No. Easton.</i>
Mallory, Frank Burr, A.B. 1886,	<i>Cleveland, O.</i>
Nichols, Edward Hall, A.B. 1886,	<i>Reading.</i>
Pelton, Clarence Whitfield,	<i>Dedham.</i>
Pratt, Charles Augustus, A.B. 1886,	<i>E. Somerville.</i>
Ray, John Edward,	<i>Boston.</i>
Rogers, Albert Edward,	<i>Boston.</i>
Smith, William Lord, A.B. 1886,	<i>Boston.</i>
Thomas, John Jenks, A.B. (<i>Williams Coll.</i>) 1886,	<i>Columbus, O.</i>

THIRD CLASS.

Abbot, Edward Stanley, A.B. 1887,	<i>Cambridge.</i>
Ames, John Lincoln, A.B. 1887,	<i>Waltham.</i>
Ayer, Richard Gilbert,	<i>Haverhill.</i>
Baird, Julian William, A.M., PH.C. (<i>Univ. of Mich.</i>) 1883,	<i>Boston.</i>
Bancroft, George Andrew,	<i>Lancaster.</i>
Bartol, John Washburn, A.B. 1887,	<i>Lancaster.</i>
Blake, John Bapst, A.B. 1887,	<i>Boston.</i>
Bowker, Everett M.,	<i>Brookline.</i>
Bragdon, Horace Elwood,	<i>E. Boston.</i>
Brooks, William Allen, A.B. 1887,	<i>Haverhill.</i>

Bryant, Edward Gilman,	<i>Roxbury.</i>
Butler, John Edward, A.B. (<i>Amherst Coll.</i>) 1885,	<i>Jamaica Plain.</i>
Chenery, Willam Elisha, A.B. (<i>Boston Univ.</i>) 1887,	<i>Boston.</i>
Coggeshall, Frederic, A.B. 1886,	<i>Cambridge.</i>
Connell, Arthur Irving, A.B. (<i>Brown Univ.</i>) 1887,	<i>Fall River.</i>
Coolidge, Frederic Shurtleff, A.B. 1887,	<i>Boston.</i>
Crockett, Eugene Anthony,	<i>W. Newton.</i>
Crooker, George Hazard, A.B. (<i>Brown Univ.</i>) 1887,	<i>Providence, R. I.</i>
Cummings, Irving Oscar, S.B. (<i>Dartmouth Coll.</i>) 1887,	<i>Concord, N. H.</i>
Curtis, Henry Fuller, A.B. (<i>Colby Univ.</i>) 1887,	<i>Kennebunk, Me.</i>
Derby, William Parsons,	<i>Boston.</i>
Dudley, James Willard, A.B. 1887,	<i>Warsaw, N. Y.</i>
Duff, John, S.B. (<i>Mass. Inst. of Technol.</i>) 1881,	<i>Charlestown.</i>
Dwight, Edwin Welles,	<i>Auburndale.</i>
Faulkner, William Edward, A.B. 1887,	<i>Keene, N. H.</i>
Finn, Edward William,	<i>Dedham.</i>
Fitz, George Wells,	<i>Peconic, N. Y.</i>
Flagg, Franklin Parkinson,	<i>Woburn.</i>
Foote, Edward Milton, A.B. (<i>Univ. of Rochester</i>) 1886,	<i>Boston.</i>
Fourtin, Edmund Randolph Peaslee,	<i>Wakefield.</i>
Giblin, Frank Joseph,	<i>So. Boston.</i>
Gleason, Edwin Putnam,	<i>Needham.</i>
Grimes, Warren Parker,	<i>Hillsboro' Br., Me.</i>
Gross, Harold Gordon, S.B. (<i>Mass. Inst. of Tech.</i>) 1888,	<i>Eureka, Cal.</i>
Hall, George Clifton,	<i>Chelsea.</i>
Hicks, Joseph,	<i>Boston.</i>
Hitchcock, Henry Russell, A.B. (<i>Brown Univ.</i>) 1884, A.M. (<i>Ibid.</i>) 1888,	<i>Foxboro'.</i>
Hoover, Charles Frank, A.B. 1887,	<i>Miamisburg, O.</i>
Houghton, Silas Arnold, A.B. 1887,	<i>Charlestown.</i>
Jackson, James Marsh, A.B. 1887,	<i>Roxbury.</i>
Johnson, Theodore Darwin Barton,	<i>Cambridge.</i>
Jones, Lombard Carter, A.B. 1887,	<i>Sandwich.</i>
Kelley, Stephen Augustus,	<i>Charlestown.</i>
King, William Rufus,	<i>Charlestown.</i>
Kingsley, William Lyon, A.B. (<i>Yale Univ.</i>) 1886,	<i>Rome, N. Y.</i>
Knight, Augustus Smith, A.B. 1887,	<i>Manchester.</i>
Knowlton, Herbert Eugene,	<i>Belfast, Me.</i>
Lothrop, Howard Augustus, A.B. 1887,	<i>Sharon.</i>

Lyons, William Henry, A.B. (<i>Holy Cross Coll.</i>) 1886,	<i>Manchester, N. H.</i>
McGuigan, John Joseph, A.B. (<i>Boston Coll.</i>) 1887,	<i>Danvers.</i>
Mackenzie, John Milne, A.B. (<i>Brown Univ.</i>) 1876, A.M. (<i>Ibid.</i>) 1879,	<i>Fall River.</i>
McPherson, William Ellsworth,	<i>Canton.</i>
Mahoney, Michael Peter,	<i>E. Providence, R. I.</i>
Morgan, Lewis Edson,	<i>Boston.</i>
Morse, John Lovett, A.B. 1887,	<i>Taunton.</i>
O'Shea, Edward Flavian,	<i>E. Boston.</i>
Palmer, Franklin Sawyer, A.B. 1886,	<i>Boston.</i>
Park, Francis Edwin,	<i>Boston.</i>
Pearson, Maurice Wellesley,	<i>Byfield.</i>
Percy, David Thomas,	<i>Salem.</i>
Pierce, Edward Elisha, A.M. (<i>Brown Univ.</i>) 1880,	<i>Providence, R. I.</i>
Proctor, Frank Ingersoll, A.B. 1887,	<i>Boston.</i>
Quackenboss, Alexander, A.B. (<i>Dartmouth Coll.</i>) 1887,	<i>Worcester.</i>
Robinson, Thomas Johns, A.B. 1887,	<i>E. Taunton.</i>
Rolfe, William Alfred,	<i>Chili.</i>
Simpson, James Edwin,	<i>E. Boston.</i>
Stickney, Edwin Pangman,	<i>Sunapee, N. H.</i>
Straw, Amos Gale, A.B. (<i>Dartmouth Coll.</i>) 1887,	<i>Manchester, N. H.</i>
Strong, James Henry,	<i>E. Boston.</i>
Swan, Will Howard,	<i>Winchester, N. H.</i>
Titus, Hermon Franklin, A.B. (<i>Madison Univ.</i>) 1873, A.M. (<i>Ibid.</i>) 1876,	<i>Newton.</i>
Walker, Lewis Marshall,	<i>Boston.</i>
Washburne, Elliott,	<i>Taunton.</i>
Welch, Edward John, A.B. (<i>Holy Cross Coll.</i>) 1887,	<i>Billerica.</i>
Whitmarsh, Willard Francis, A.B. (<i>Amherst Coll.</i>) 1887,	<i>No. Abington.</i>
Wolf, Theodore Parker,	<i>Boston.</i>
Young, Charles Dean, A.B. (<i>Univ. of Rochester</i>) 1885, A.M. (<i>Ibid.</i>) 1888,	<i>Rochester, N. Y.</i>

SECOND CLASS.

Ash, John Henry,	<i>No. Weymouth.</i>
August, Albert,	<i>Roxbury.</i>
Bailey, George Guy,	<i>Rowley.</i>
Baker, Frederick Herbert,	<i>Billerica.</i>
Balch, Franklin Greene, A.B. 1888,	<i>Jamaica Plain.</i>

Bowman, Fred Raymond, A.B. (<i>Colby Univ.</i>) 1887,	<i>Sidney, Me.</i>
Brough, David Dandie, A.B. (<i>Princeton Coll.</i>) 1888,	<i>Providence, R. I.</i>
Cabot, Follen,	<i>Brookline.</i>
Cavanagh, Charles Russell,	<i>Mattapan.</i>
Clark, Sidney Avery, A.B. (<i>Amherst Coll.</i>) 1888,	<i>Northampton.</i>
Clarke, Elisha Davis, PH.B. (<i>Alfred Univ.</i>) 1888,	<i>Hope Val, R. I.</i>
Cogswell, George Proctor, A.B. 1888,	<i>Cambridge.</i>
Collier, Lawrence Henry,	<i>E. Cambridge.</i>
Courtney, Samuel Edward,	<i>Malden, W. Va.</i>
Covell, Henry Hall, A.B. (<i>Yale Univ.</i>) 1888,	<i>Rochester, N. Y.</i>
Curtis, John Benedict, A.B. (<i>Boston Coll.</i>) 1887,	<i>E. Cambridge.</i>
Cutler, George Washington,	<i>Waltham.</i>
Dane, John, A.B. 1888,	<i>Boston.</i>
Davis, Frederick Augustus, B.S. (<i>Mass. Agric.</i> <i>Coll.</i>) 1887,	<i>Lynn.</i>
Donovan, Henry Vincent,	<i>Lawrence.</i>
Edson, Carroll Everett, A.B. 1888,	<i>Roxbury.</i>
Fox, Charles Leonard,	<i>Lowell.</i>
Francis, Carleton Shurtleff, A.B. 1888,	<i>Brookline.</i>
Fraser, Donald Allan,	<i>E. Boston.</i>
Frothingham, Richard,	<i>Charlestown.</i>
Gorey, James Philip,	<i>Fitchburg.</i>
Hamilton, Edward Sylvester, A.B. (<i>Holy Cross</i> <i>Coll.</i>) 1888,	<i>Holliston.</i>
Harwood, Charles Hamant, A.B. 1888,	<i>Boston.</i>
Higgins, Frank Albert, S.B. (<i>Worcester Poly-</i> <i>technic Inst.</i>) 1886,	<i>Manchester, N. H.</i>
Holder, Oscar Howe, A.B. 1888,	<i>Boston.</i>
Hoyt, Edward Malcolm,	<i>Wentworth, N. H.</i>
Jewett, Fred Bryce, A.B. (<i>Amherst Coll.</i>) 1888,	<i>Ballston, N. Y.</i>
Jordan, Charles Harold,	<i>Winchester.</i>
Keleher, William Henry,	<i>Woburn.</i>
Kelly, George Draper,	<i>Worcester.</i>
Lane, Francis Augustus,	<i>Peabody.</i>
Lane, Frederick Douglas,	<i>Lawrence.</i>
Leahey, George Henry Aloysius,	<i>Lowell.</i>
Lund, Fred Bates, A.B. 1888,	<i>Concord, N. H.</i>
Lyons, Christopher Philip,	<i>E. Boston.</i>
McCarthy, John Coakley,	<i>Malden.</i>
Macdonald, William Huntley, A.B. (<i>St. Francis</i> <i>Xavier Coll.</i>) 1888,	<i>Antigoniske, N. S.</i>

McIntyre, James Angus, A.B. (<i>Univ. of New Brunswick</i>) 1880,	<i>St. John, N. B.</i>
McKenna, Francis Patrick,	<i>So. Boston.</i>
Miller, Henry Cowles, A.B. 1886,	<i>Melrose.</i>
Moran, John Joseph,	<i>So. Boston.</i>
Morris, George Patrick, A.B. 1883,	<i>Boston.</i>
Murphy, Timothy Joseph, A.B. (<i>Boston Coll.</i>) 1888,	<i>Roxbury.</i>
Nelson, Charles Danforth,	<i>Roxbury.</i>
Oakey, Daniel,	<i>Cambridge.</i>
O'Brien, John Francis, A.B. (<i>Boston Coll.</i>) 1888,	<i>Charlestown.</i>
Pease, Edward Allen, A.B. 1888,	<i>Boston.</i>
Perkins, Jay,	<i>Penobscot, Me.</i>
Porter, Charles Allen, A.B. 1888,	<i>Boston.</i>
Post, Alfred Charles,	<i>Boston.</i>
Powers, Edward Joseph, A.B. (<i>Holy Cross Coll.</i>) 1888,	<i>E. Boston.</i>
Quirk, Charles Hudson,	<i>Buenos Ayres.</i>
Raddin, Frederic Stocker, A.B. (<i>King's Coll.</i>) 1888,	<i>Chelsea.</i>
Redmond, James William,	<i>Boston.</i>
Risk, Winthrop Allen,	<i>Lawrence.</i>
Robbins, Fred Gibson,	<i>Salem.</i>
Rowen, Henry Stanislaus,	<i>Cambridge.</i>
Sawyer, Walter Fairbanks,	<i>Keene, N. H.</i>
Scannell, Michael Edward,	<i>Lawrence.</i>
Senay, Joseph,	<i>Salem.</i>
Sheehan, William Joseph, A.B. (<i>Boston Coll.</i>) 1888,	<i>Peabody.</i>
Shepard, Thomas Osborne, A.B. 1888,	<i>Salem.</i>
Slattery, John Richard, A.B. (<i>Georgetown Coll.</i>) 1885,	<i>So. Boston.</i>
Smith, Edward Samuel, A.B. (<i>Holy Cross Coll.</i>) 1885,	<i>Boston.</i>
Stacey, Charles Franklin,	<i>Charlestown.</i>
Stebbins, Walter Gay, A.B. (<i>Yale Univ.</i>) 1886,	<i>Springfield.</i>
Stowell, Edmund Channing, A.B. 1888,	<i>Boston.</i>
Taylor, Edward Wyllys, A.B. 1888,	<i>Montclair, N. J.</i>
Tenney, Benjamin, A.B. (<i>Dartmouth Coll.</i>) 1883, A.M. (<i>Ibid.</i>) 1887,	<i>Boston.</i>
Toomey, John Peter,	<i>E. Boston.</i>
Tower, Frederick Russell,	<i>Boston.</i>

Towle, Harvey Parker, A.B. 1888	<i>Somerville.</i>
Tracy, Edward Aloysius,	<i>So. Boston.</i>
Tully, Edward Joseph,	<i>Lowell.</i>
Webster, Jonathan Edwards,	<i>Peabody.</i>
Wheeler, Charles Douglas, A.B. (<i>Williams Coll.</i>) 1888,	<i>Worcester.</i>
Whipple, Farrington Hasham, A.B. 1888,	<i>Portland, Me.</i>
Wynne, Sidney Yale,	<i>Deerfield.</i>

FIRST CLASS.

Achard, Hermann Jacoby,	<i>Basel, Switzerland.</i>
Almy, Arthur Pickering,	<i>Fall River.</i>
Bemis, John Merrick,	<i>Worcester.</i>
Bicknell, William Horace,	<i>No. Weymouth.</i>
Bowles, George Hall, A.B. (<i>Dartmouth Coll.</i>) 1884,	<i>Plymouth, N. H.</i>
Brewster, George Washington Wales, A.B. 1889,	<i>Roxbury.</i>
Cabot, Richard Clarke, A.B. 1889,	<i>Brookline.</i>
Carter, Curtis Sumner,	<i>Lynn.</i>
Chase, Arthur Brown,	<i>Lynn.</i>
Chase, Richard Fitch,	<i>Baldwin, Me.</i>
Cobb, Farrar Crane,	<i>Dorchester.</i>
Coffin, Rockwell Augustus,	<i>Bangor, Me.</i>
Cogswell, Charles Frederick, A.B. 1889,	<i>Charlestown.</i>
Craig, Daniel Hiram,	<i>Malden.</i>
Cullis, Charles Franklin,	<i>Boston.</i>
Cunningham, Joseph Henry,	<i>Somerville.</i>
Daly, Richard Francis,	<i>Boston.</i>
Davis, Abel Albert,	<i>Brooklyn, N. Y.</i>
Deal, George Francis,	<i>E. Boston.</i>
Deane, William Brecke, A.B. (<i>Brown Univ.</i>) 1889,	<i>Ogdensburg, N. Y.</i>
DeLue, Frederick Spaulding,	<i>Roxbury.</i>
DeWolfe, Edward Gardner,	<i>Charlestown.</i>
Donahue, William Francis, A.B. (<i>Holy Cross Coll.</i>) 1889,	<i>Worcester.</i>
Donnelly, Charles Thomas,	<i>So. Boston.</i>
Dunlap, Charles Bates, A.B. 1889,	<i>Indian Creek, W. Va.</i>
Edmonds, Louis,	<i>Boston.</i>
Edwards, William Lanergan,	<i>Boston.</i>
Eggleston, James Denslow,	<i>Newton.</i>
Emerson, Herbert Clark, A.B. (<i>Amherst Coll.</i>) 1889,	<i>Newton.</i>

Ferguson, Charles John,	<i>So. Boston.</i>
Fernandez, Lando Porter,	<i>Charlestown.</i>
Frost, N. Alford,	<i>Derry, N. H.</i>
Gates, Stephen Mason,	<i>Worcester.</i>
Gay, Warren Fisher,	<i>Boston.</i>
Goodwin, Ezra Frederick Plumer,	<i>E. Boston.</i>
Harlow, George Arthur, A.B. (<i>Amherst Coll.</i>) 1889,	<i>Augusta, Me.</i>
Hastings, Robert Worthington, A.B. (<i>Amherst Coll.</i>) 1888,	<i>Warren.</i>
Hayden, William Chauncey,	<i>No. Woburn.</i>
Hodges, Almon Danforth, A.B. 1889,	<i>Roxbury.</i>
Ilsley, Frederick Roscoe,	<i>Chelsea.</i>
Keany, Francis Joseph, A.B. (<i>Boston Coll.</i>) 1888,	<i>Boston.</i>
Keenan, Thomas Henry, A.B. (<i>Mt. St. Mary's Coll.</i>) 1889,	<i>E. Boston.</i>
Keith, Frederick Scott,	<i>Waltham.</i>
Klagge, Heinrich Frederick,	<i>E. Boston.</i>
Knapp, Edgar Jonas,	<i>Menomonie, Wis.</i>
Leahy, Thomas Joseph, A.B. (<i>Holy Cross Coll.</i>) 1888,	<i>Cambridge.</i>
Leary, Timothy,	<i>Waltham.</i>
Legasey, George Joseph,	<i>Worcester.</i>
Libby, Jesse Herbert,	<i>Charlestown.</i>
Littlefield, Samuel Horace,	<i>Roxbury.</i>
Loveland, John Elijah, A.B. (<i>Wesleyan Univ.</i>) 1889,	<i>Middletown, Conn.</i>
McLaughlin, Daniel Joseph, A.B. (<i>Boston Coll.</i>) 1888,	<i>Boston.</i>
MacNichol, George Pope,	<i>Calais, Me.</i>
Manahan, Herbert Wellington,	<i>Lawrence.</i>
Merrick, Robert Michael,	<i>Dorchester.</i>
Merriman, Thomas Craven,	<i>Jamaica Plain.</i>
Mongan, Charles Edward, A.B. (<i>Boston Coll.</i>) 1883,	<i>Somerville.</i>
Moran, Horace Sheridan, A.B. (<i>Williams Coll.</i>) 1889,	<i>Wakefield.</i>
Murphy, John Henry,	<i>Boston.</i>
O'Brien, Denis Aloysius, A.B. (<i>Holy Cross Coll.</i>) 1888,	<i>Lewiston, Me.</i>
O'Brien, John Patrick,	<i>Boston.</i>
O'Donnell, Louis Patrick,	<i>Plymouth.</i>
Ogden, Jay Bergen,	<i>Rochester, N. Y.</i>

Phelps, John Samuel, A.B. 1889,	<i>W. Lynn.</i>
Phillips, James Lee,	<i>Boston.</i>
Ronayne, David Patrick, A.B. (<i>Holy Cross Coll.</i>)	
1889,	<i>Worcester.</i>
Ruppel, Emil Fraser,	<i>Boston.</i>
Selva, Julio, A.B. (<i>Coll. of Nicaragua</i>),	<i>College Hill.</i>
Shaw, John Holbrook,	<i>Plymouth.</i>
Shurtleff, George Frederick,	<i>Westfield.</i>
Silva, Francis Pierce,	<i>Charlestown.</i>
Smith, Charles Morton,	<i>Harrisville, N. H.</i>
Smith, George Seeley,	<i>Portland, Me.</i>
Smith, Lonan Jason,	<i>Boston.</i>
Snow, Wallace,	<i>Boston.</i>
Spencer, George Albert,	<i>Ipswich.</i>
Starr, Frederick Ratchford,	<i>Boston.</i>
Stevens, Charles Benjamin, A.B. (<i>Amherst Coll.</i>)	
1887,	<i>Worcester.</i>
Sullivan, David Augustus,	<i>So. Boston.</i>
Sullivan, James Stephen, A.B. (<i>Holy Cross</i>	
<i>Coll.</i>) 1889,	<i>Worcester.</i>
Thayer, Eugene, A.B. (<i>Amherst Coll.</i>) 1889,	<i>Boston.</i>
Tirrell, Vincent Meader,	<i>So. Weymouth.</i>
Tuttle, George Herman, A.B. 1887,	<i>Acton Centre.</i>
Varnum, Francis Joseph, A.B. (<i>Holy Cross Coll.</i>)	
1889,	<i>Boston.</i>
White, Verdeil Oberon, A.B. (<i>Bowdoin Coll.</i>)	
1889,	<i>Wilton, Me.</i>
Wilder, Raymond Sargent, A.B. 1889,	<i>Cambridge.</i>
Young, Charles Oscar, A.B. (<i>Augustana Coll.</i>)	
1888,	<i>Lindsboro', Kan.</i>

SUMMARY.

IN COURSES FOR GRADUATES, 1889-90 (to Dec. 1) . .	20
FOURTH CLASS	23
THIRD CLASS	77
SECOND CLASS	83
FIRST CLASS	87
	<hr/>
TOTAL	290

THE MEDICAL SCHOOL.

REQUIREMENTS FOR ADMISSION.

All candidates for admission, except those who have passed an examination for admission to Harvard College, must present a degree in Letters, Science, or Medicine, from a recognized college or scientific school, or pass an examination in the following subjects:—

1. ENGLISH. Every candidate will be required to write, legibly and correctly, an original English composition of not less than two hundred words, and also to write English prose from dictation.

2. LATIN. The translation of easy Latin prose.

3. PHYSICS. A competent knowledge of Physics (such as may be obtained from Balfour Stewart's Elements of Physics).

4. ELECTIVE SUBJECT. Each candidate must pass an examination in any *one* of the following subjects: French, German, the Elements of Algebra or of Plane Geometry, Botany.

Whenever the candidate shall give evidence of having passed a satisfactory examination in any of the above requirements either at Harvard College or at the Lawrence Scientific School, a subsequent examination in such subject or subjects will not be demanded for his admission to the Medical School.

Candidates, who pass in two of the four subjects, will be admitted conditionally; but, until these conditions are made up, no student will be permitted to take part in any exercises of the third class, or present himself for examination in the subjects of that class.

The examinations will be held at the Medical School and conducted in writing; specimens of the papers used will be found in the Catalogue to be obtained of the Dean. In judging the work of the candidate, the spelling, grammar, and construction will be considered.

The examinations for admission are held on the Thursday following the last Wednesday in June, and on the Monday preceding the last Wednesday in September, beginning at 10 A.M.

In 1890 the *examinations for admission* will ALSO be held at the following places, beginning at 8 A.M. on Thursday, June 26:—

In *Andover*, in rooms of the Phillips Academy; in *Quincy*, in rooms of the Adams Academy; in *Exeter, N.H.*, in rooms of the Phillips Exeter Academy; in *Concord, N.H.*, in the rooms of St. Paul's School; in *New York*, in the lecture-room of the Young Men's Christian Association.

Twenty-third St., corner of Fourth Ave. ; in *Albany, N. Y.*, in the rooms of the Young Men's Christian Association ; in *Philadelphia*, in the library-hall of the Academy of Natural Sciences, S. W. corner of Nineteenth and Race Sts. ; in *Cincinnati*, in the rooms of the Law School, College Building, Walnut St. ; in *Chicago*, in the rooms of the Chicago Manual Training School, corner of Michigan Ave. and Twelfth St. ; in *St. Louis*, in the Central High School building, corner of Olive and Fifteenth Sts. ; in *San Francisco*, in rooms of the Boys' High School, on Sutter St., between Gough and Octavia Sts. ; and in some convenient city in Europe, to be announced later.

DIVISION OF STUDIES.

FOUR YEARS' COURSE.

For the First Year. — Anatomy, Physiology, General Chemistry,* Medical Chemistry during the second half-year, and Materia Medica.

For the Second Year. — Practical and Topographical Anatomy, Medical Chemistry during the first half-year, Pathological Anatomy, Clinical Medicine, Surgery, Clinical Surgery, Therapeutics, and Diseases of Children.

For the Third Year. — Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery ; and, as elective studies, Ophthalmology, Otology, Dermatology, Diseases of the Nervous System, Diseases of Children, Mental Diseases, Gynæcology, and Legal Medicine.

For the Fourth Year. — Ophthalmology, Otology, Dermatology, Laryngology, Mental Diseases, Diseases of the Nervous System, Gynæcology, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Legal Medicine, Orthopedic Surgery, Genito-urinary Diseases, Hygiene, Vaccination, Bacteriology, Ovarian Tumors, Clinical Microscopy, and the Preparation of Food for Infants and Invalids.

THREE YEARS' COURSE.

For the First Year. — Anatomy, Physiology, General Chemistry,* Medical Chemistry during the second half-year, and Materia Medica.

For the Second Year. — Practical and Topographical Anatomy, Medical Chemistry during the first half-year, Pathological Anatomy, Clinical Medicine, Clinical Surgery, Therapeutics, and Diseases of Children.

* Any student who shall have previously passed in the Undergraduate department or Scientific School of Harvard University, or in the Summer Courses at Harvard College or the Medical School, an examination in General Chemistry (including qualitative analysis) will be exempt from examination in this branch, and may pursue the study of Medical Chemistry during his first year. The latter privilege will be granted to students from other colleges and scientific schools who have received instruction in general chemistry equivalent in character and amount to that of the first year, on passing a satisfactory examination at the September examination, provided that satisfactory evidence of such previous study be sent to the Dean of the Faculty one month before the date of this examination.

For the Third Year. — Obstetrics, Clinical and Operative Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Gynæcology, Diseases of Children, Legal Medicine.

METHODS OF INSTRUCTION.

The following methods of instruction are adopted in the several departments: —

Anatomy and Histology. — Lectures; various practical exercises, including abundant dissection, under the direction of the Demonstrator; recitations and demonstrations; histology, and embryology. The histological department has been reorganized, and the laboratories have been placed under the charge of special instructors. Laboratory instruction in the use of the microscope and in histology and embryology is offered to the first-year students. Accommodations are provided for those students who wish to pursue special or advanced courses. Facilities for original work are duly provided; students wishing to carry out any histological or embryological research receive all necessary assistance, and special efforts are made to provide material for original work. Microscopes are provided for those whose means do not permit the purchase of these instruments.

Physiology. — Lectures, recitations, conferences, and practical demonstrations in the Laboratory. To students of the second, third, and fourth classes, opportunities are given for original investigations in the Laboratory.

Chemistry is taught mainly by practical work in the Laboratory, the student having his own desk and apparatus. Descriptive Chemistry and qualitative analysis are taught during the first year. Besides the laboratory-work, there is a lecture and a recitation every week. In the second half of the first year and the first half of the second year Medical Chemistry is taught by lectures, recitations, and exercises in the Laboratory.

Pathological Anatomy is taught by lectures, recitations, and practical instruction in pathological histology. The collection of the Warren Anatomical Museum is used to illustrate the lectures, and morbid specimens in a fresh state are shown at the recitations, where the student is called upon to describe the appearances. Students also receive practical instruction in the method of making autopsies, being present at those made at both hospitals. The instruction in pathological histology, including the diagnosis of tumors, is continued throughout the year. Each student, provided with a microscope, the necessary instruments and reagents, prepares the various objects and submits them for explanation and criticism. The formation of small classes for special work and the individual pursuit of original investigations are encouraged.

The school possesses a large number of microscopes for the use of those students whose means will not permit the purchase of an instrument.

Materia Medica. — *Materia Medica* is taught by lectures and recitations with exhibition of medicines and pharmaceutical processes. Besides the large and complete cabinet of *materia medica* in the Museum, a collection of officinal drugs and chemicals, and of all the important preparations is placed where it can be seen by the students at any time.

Therapeutics is taught by lectures and demonstrations supplemented by clinical exercises at the Hospital to sections of the class.

The Theory and Practice of Medicine. — Lectures, recitations, and hospital visits.

Clinical Medicine. — Daily instruction is given in this department by clinical lectures, hospital visits, and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticised. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the clinical conference, affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticised by the class, by the Professor of Clinical Medicine, and other teachers in the School. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy, which affords students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

Surgery. — Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Orthopedic Surgery, Surgical Histology, Bandaging, and Operative Surgery. In the last, students of the third and fourth classes are supplied with material for repeating the usual surgical operations.

Clinical Surgery. — Instruction in Clinical Surgery is given at the Massachusetts General Hospital and City Hospital, each week throughout the year, as follows:—

One clinical conference, one clinical lecture, two visits in the hospital wards, and two public operating days.

The surgical clinical conference is an exercise at which a student of the third class presents an elaborate and carefully prepared paper on a surgical case in the hospital wards, which has been assigned him. This paper he is obliged to read in the amphitheatre of the Hospital before the whole class, and defend it from their criticism. At the close of the exercise the Professor of Clinical Surgery gives a résumé of the case and his opinions upon it. The students of the second class attend these exercises preparatory to their active participation in them in their third year.

The clinical lecture is given either over surgical cases brought into the amphitheatre and illustrated by explorations or operations, or at the bedside in the wards illustrating the dressing of wounds, the treatment of fractures, and the progress of cases from entrance to discharge from the Hospital. Every candidate for a degree is required to report a case in clinical surgery.

Obstetrics. — Lectures and recitations. Students are required to take charge of least four cases of obstetrics. A course on operative obstetrics, with practical illustrations on the cadaver, is given during the second half-year.

Diseases of Women. — Lectures and practical instruction at the different dispensaries in the education of the touch. In these institutions every facility is given the student to become familiar with the different forms of uterine disease. A course in operative gynaecology extending throughout the year at the Free Hospital for Women is open to students of the third and fourth classes. To students of the fourth class cases are assigned for personal examination; these cases are reported in full at the clinical conference, and are made the subject of discussion by members of the class and the instructor. These students are also called upon to assist at the operations in the operative course. There is also a course in operative gynaecology upon the cadaver, at which each student of the fourth class is expected to perform the ordinary gynaecological operations with his own hands.

Diseases of Children. — The instruction in this subject consists of a systematic course of lectures beginning in the latter half of the second year and extending through the entire third year.

The second-year lectures comprise a careful study of infant-feeding and the development of the normal infant and child, and are intended to be preparatory to the study of the diseased conditions, which are taught in the third year.

The teaching in the third year consists of lectures and the direct examination of cases. The amount of material at the disposal of the students in this department is very large, as it comprises the cases which are treated at the Boston Dispensary, Children's Hospital, and City Hospital. The special wards for Diphtheria and Scarlet Fever lately opened at the City Hospital offer unusual advantages for the study of these diseases, and are always at the disposal of Assistant Professor ROTCH for the benefit of the students. The instruction in the third year also includes eight clinical conferences and the visiting in their homes, in the Dispensary Districts, of such rare and interesting cases as are not usually seen in the hospitals.

At the end of the third year there are eight exercises devoted entirely to the review of the whole subject as taught in the second and third years, so that the student is not only prepared for his third-year examination, but also for entering upon the more extended clinical teaching of his

fourth year. The intention of the teaching in the fourth year is to have the student see large numbers of cases, and to carefully follow them in their treatment from the beginning to the end of the disease.

Ophthalmology. — A complete course is delivered upon the diseases of the eye, including clinical instruction and the use of the ophthalmoscope.

Dermatology is taught by lectures and clinical illustrations. The special out-patient department at the Massachusetts General Hospital furnishes ample opportunities for illustration.

Syphilis. — Recitations and clinical instruction.

Otology. — Lectures and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary, and at the Boston City Hospital.

Laryngology. — Lectures and demonstrations.

Diseases of the Nervous System. — Lectures and demonstrations.

Legal Medicine. — Lectures, recitations, and demonstrations.

Embryology and Histology. — Lectures.

Hygiene. — Lectures and demonstrations.

TEXT-BOOKS.

The following works are recommended as text-books, and for collateral reading and consultation: —

ANATOMY.

Text-Books. — Gray (11th edition). Quain (9th edition). Wilson. Holden's Landmarks. Dwight's Frozen sections of a Child. Treves' Applied Anatomy. Stöhr's Lehrbuch der Histologie.

Collateral Reading. — Harrison Allen's Anatomy. Tillaux, Anatomie topographique. Dwight's Anatomy of the Head. Holden's Osteology. Humphrey's Human Skeleton. Morris, on the Joints. Klein's Atlas of Histology. Foster and Balfour's Embryology. Weisse's Practical Human Anatomy. Klein's Histology. Whitman's Methods in Microscopic Anatomy. Carnoy's Biologie cellulaire. Haddon's Introduction to Embryology.

PHYSIOLOGY.

Text-Books. — Dalton's Human Physiology. Foster's Text-book of Physiology. Martin, The Human Body. Kirke's Handbook of Physiology. Yeo's Manual of Physiology.

Collateral Reading. — Pavy, on Food and Dietetics. Fick, Compendium der Physiologie. Gamgee's Physiological Chemistry of the Animal Body. McGregor-Robertson's Elements of Physiological Physics. Landois' Manual of Human Physiology. Stirling's Practical Physiology.

GENERAL CHEMISTRY.

Text-Books. — Witthaus' Medical Student's Manual of Chemistry.

Collateral Reading. — Miller's, Roscoe and Schorlemmer's, or Fownes' Chemistry. Douglass and Prescott's, or Fresenius' Qualitative Analysis.

MEDICAL CHEMISTRY.

Text-Books. — Tyson, Practical Examination of Urine. Wharton and Stillé's Medical Jurisprudence, Vol. II., on Poisons, 4th edition.

Collateral Reading. — Ultzmann and Hoffmann's Atlas der Harnsedimente. Neubauer and Vogel, Analysis of the Urine. Hoppe-Seyler, Physiologische Chemie. Taylor on Poisons. Wormley's Micro-Chemistry of Poisons.

MATERIA MEDICA.

Text-Books. — Mann's Prescription Writing. United States Dispensatory.

Collateral Reading. — H. C. Wood's Therapeutics. Bartholow's Therapeutics. Brunton's Pharmacology, Therapeutics, and Materia Medica. Edes' Materia Medica and Therapeutics.

PATHOLOGICAL ANATOMY.

Text-Books. — Ziegler's Pathological Anatomy and Pathogenesis. Orth's Compend of Diagnosis in Pathological Anatomy.

Collateral Reading. — Friedlaender's Use of the Microscope in Clinical and Pathological Examinations. Coats' Manual of Pathology.

THERAPEUTICS.

Text-Books. — H. C. Wood's Therapeutics. Edes' Materia Medica and Therapeutics.

Collateral Reading. — Brunton's Pharmacology, Therapeutics and Materia Medica. Ringer's Therapeutics.

OBSTETRICS.

Text-Books. — Lusk's Manual of Midwifery.

Collateral Reading. — Schroeder's Manual of Midwifery. Cazeaux's Midwifery. Winckel's Diseases of Childbed. Schauta's Grundriss der operativen Geburtshilfe. Kucher's Puerperal Convalescence.

THEORY AND PRACTICE.

Text-Books. — Strümpell's Text-Book of Medicine.

Collateral Reading. — Pepper's System of Practical Medicine by American authors. Flint's Practice of Medicine. Cutler and Garland's Percussion Outlines.

CLINICAL MEDICINE.

Text Books. — Strümpell's Text-Book of Medicine. Flint's Practice of Medicine. DaCosta's Medical Diagnosis. Flint's Manual of Percussion and Auscultation.

Collateral Reading. — Pepper's System of Practical Medicine by American Authors. Fagge's Practice of Medicine. Gowers' Diseases of the Nervous System. Cutler and Garland's Percussion Outlines.

SURGERY.

Bryant's Practice of Surgery. Billroth's Surgical Pathology. Smith's Operative Surgery.

Holmes's System of Surgery. The International Encyclopedia of Surgery. Van Buren and Keyes's Genito-urinary Organs and Syphilis. Guérin, *Éléments de Chirurgie Opératoire*.

GYNAECOLOGY.

Text-Books. — Thomas, on the Diseases of Women. Fifth Edition.

Collateral Reading. — Emmet's Principles and Practice of Gynaecology. Klob's Pathological Anatomy of the Female Sexual Organs. Savage, The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs. Davenport, on the Diseases of Women.

OPHTHALMOLOGY.

Text-Books. — Williams, Soelberg Wells, Nettleship, Zehender. Loring, on the Ophthalmoscope. Landolt, on Refraction and Accommodation.

OTOLOGY.

Text-Books. — Barr, Roosa, Burnett.

Collateral Reading. — Politzer, Diseases of the Ear. Schwartze, *Chirurgische Krankheiten des Ohres*.

DERMATOLOGY.

Collateral Reading. — Duhring, Hyde, Robinson, Kaposi, Behrend, v. Ziemssen.

LEGAL MEDICINE.

Text-Books. — Taylor's Manual of Medical Jurisprudence.

Collateral Reading. — Ogston, Reese, Hofmann, Woodman, and Tidy.

INSTRUCTION FOR 1889-90 TO STUDENTS OF THE THREE YEARS' COURSE.

Anatomy.

Descriptive Anatomy. *Four times a week.* Professor DWIGHT.

Practical Anatomy, with Exercises in Dissection. *Eight hours daily from October 15th till May.* Demonstrations and Recitations. Drs. MIXTER, CONANT, and MUNRO.

Topographical and Advanced Anatomy. *Once a week.* Professor DWIGHT. Topographical and Applied Anatomy. *From November till May.* Assistant Professor M. H. RICHARDSON.

Laboratory Exercises in Histology. *Twice a week.* Assistant Professor C. S. MINOT, and Dr. QUINCY.

Histology. *Once a week during the first half-year.* Assistant Professor C. S. MINOT. Embryology. *Eight lectures during the second half-year.* Assistant Professor C. S. MINOT.

Physiology.

Systematic and Experimental Physiology. *Four times a week.* Dr. J. W. WARREN.

Laboratory Exercises in Experimental Physiology. *Twice a week.* Dr. J. W. WARREN.

Chemistry.

Descriptive and Analytical Chemistry. *Twice a week, with an additional weekly exercise during the first ten weeks.* Professor HILLS.

Medical and Toxicological Chemistry. *Twice a week.* Professor WOOD. Practical Exercises in the Laboratory in Analytical and Medical Chemistry. *Daily.* Professors WOOD and HILLS, and Drs. EMERSON, HARRINGTON, and WORCESTER.

Materia Medica and Therapeutics.

Materia Medica, with the Exhibition of Drugs. *Twice a week during the second half-year.* Dr. HARRINGTON.

Therapeutics, with Demonstrations. *Twice a week.* Clinical Therapeutics. *Once a week to sections of the class.* Assistant Professor F. H. WILLIAMS.

Hygiene.

Lectures and Demonstrations. *Once a week during the second half-year.* Dr. HARRINGTON.

Pathology and Pathological Anatomy.

General Pathology and Pathological Anatomy. *Twice a week.* Professor FITZ.

Special Pathological Anatomy, with Demonstrations. *Twice a week.* Professor FITZ.

Laboratory Exercises in Pathological Histology. *Twice a week.* Drs. WHITNEY and GANNETT.

Practical Instruction in Performing Autopsies. *Throughout the year.* Professor FITZ and Dr. GANNETT.

Surgery.

Surgery. *Once a week for three months; twice a week for five months.* Professor CHEEVER.

Surgery and Surgical Pathology. *Twice a week till January.* Professor J. C. WARREN.

Surgical Conference. *Once a week from November till May.* Professor PORTER.

Clinical Surgery. Lectures. *Once a week till January.* Professor CHEEVER. *Once a week from January till March.* Professor PORTER. *Once a week from March till June.* Professor J. C. WARREN.

Operative Surgery and Surgical Anatomy. Illustrative Exercises. *Twice a week in March and April.* Professor PORTER.

Operative Surgery, *Fifteen practical exercises.* Professor PORTER assisted by Dr. MONKS.

Application of Bandages and Apparatus. *Laboratory exercises to the class in sections, after February.* Professor J. C. WARREN and Dr. BURRELL.

Surgical visits are made at the Massachusetts General Hospital by Professors PORTER and J. C. WARREN, Assistant Professor M. H. RICHARDSON, and Drs. BEACH, HOMANS, and CABOT. — At the City Hospital, by Professor CHEEVER and Drs. GAY, BOLLES, BRADFORD, POST, and GAVIN. — The Surgical Cases at the Eye and Ear Infirmary and at the Boston Dispensary are shown by the surgeons in charge.

Ophthalmology.

Diseases of the Eye. *Twice a week during the first half-year.* Professor H. W. WILLIAMS.

Clinical Ophthalmology. *Once a week till January, and after March.* Professor H. W. WILLIAMS.

Dermatology.

Diseases of the Skin. *Once a week.* Professor WHITE.

Clinical Dermatology. *Once a week.* Professor WHITE.

Syphilis.

Practical Diagnosis and Treatment of Syphilis. *Once a week for a half-year.* Dr. POST.

Otology.

Otology. *Twice a week, October and November.* Professor BLAKE.

Clinical Otology. *Once a week in January, February, and March.* Professors BLAKE and GREEN.

Theory and Practice of Physic.

Lectures. *Twice a week.* Professor F. MINOT. Recitations. *Twice a week.* Dr. CUTLER.

Clinical Medicine.

Four times a week. Professor SHATTUCK, and Dr. VICKERY. *Twice a week.* Dr. MASON.

Clinical Conference. *Once a week.* Professor SHATTUCK, and Drs. MASON, GARLAND, and VICKERY.

Practical Instruction in Auscultation and Percussion. *Six times a week during the first half-year.* Drs. GARLAND, GANNETT, and WITHINGTON.

Practical Diagnosis and Treatment of Diseases of the Nervous System. *Once a week.* Dr. WALTON.

Mental Diseases. *Once a week.* Dr. FISHER.

Medical visits are made at the Massachusetts General Hospital by Professors FITZ, W. L. RICHARDSON, and SHATTUCK, and Dr. CUTLER. — At the City Hospital, by Assistant Professor ROTCH and Drs. MASON, J. G. BLAKE, DOE, and FORSTER. — At the Danvers, South Boston, and Somerville Asylums for the Insane. — The Medical Cases at the Boston Dispensary are shown by the physicians in charge.

Diseases of the Larynx.

Practical Diagnosis and Treatment. *Six times a week, first half-year.* Professor KNIGHT.

Diseases of Children.

Practical Diagnosis and Treatment. *Twice a week.* Assistant Professor ROTCH.

Legal Medicine.

Twice a week during the first half-year. Professor DRAPER.

Obstetrics.

Theory and Practice of Obstetrics. *Twice a week.* Professor WM. L. RICHARDSON. Recitations. *Once a week.* Dr. C. M. GREEN.

Operative Obstetrics. *Twelve practical exercises.* Dr. C. M. GREEN.

Practical Instruction in Clinical Obstetrics. *Throughout the year.* Drs. C. M. GREEN, REYNOLDS and TOWNSEND.

Gynaecology.

Twice a week. Professor BAKER. Two clinics each week during the second half-year. Professor BAKER. Two clinics each week during the first half-year. Dr. DAVENPORT.

INSTRUCTION FOR 1889-90 TO STUDENTS OF THE FOURTH YEAR.

Clinical Medicine.

Once a week for one month. Professor FITZ. *Once a week for six months.* Dr. GARLAND. *Once a week for seven months.* Dr. GANNETT. *Once a week for three months.* Dr. VICKERY.

Diseases of Children.

Twice a week at Children's Hospital for three months and especial clinical exercises. Assistant Professor ROTCH.

Diseases of the Nervous System.

Once a week for four months. Dr. WALTON. *Once a week for four months.* Dr. KNAPP.

Mental Diseases.

Twice a week for four months. Dr. FISHER. *Once a week for three months.* Dr. COWLES.

Surgery.

Clinical Surgery. *Once a week for four months.* Professor PORTER. *Once a week for two months.* Professor J. C. WARREN. *Twice a week for two months.* Dr. GAY. *Twice a week for three months.* Dr. BURRELL.

Operative Surgery. *Practical Exercises.* Professor PORTER, Assistant Professor M. H. RICHARDSON, and Drs. MIXTER and MONKS.

Orthopedic Surgery. *Twice a week for two months.* Dr. BRADFORD.

Ovarian Tumors.

Once a week for two months. Dr. HOMANS.

Obstetrics.

Clinical Obstetrics. *Twice a week for five months.* Professor WM. L. RICHARDSON.

Operative Obstetrics. *Practical Exercises.* Dr. C. M. GREEN.

Gynaecology.

Twice a week for eight months. Professor BAKER. *Twice a week for three months.* Dr. DAVENPORT. *Twice a week for eight months.* Dr. STRONG. *Once a week for four months.* Dr. DOE.

Operative Gynaecology. *Practical Exercises.* Professor BAKER.

Dermatology.

Twice a week for eight months. Professor WHITE. *Twice a week for three months.* Dr. TILDEN.

Syphilis.

Twice a week for four months. Dr. GREENOUGH.

Ophthalmology.

Twice a week for three months. Professor H. W. WILLIAMS. *Twice a week for four months.* Dr. WADSWORTH.

Otology.

Three times a week for four months. Professor J. O. GREEN.

Laryngology.

Three times a week for three months. Professor KNIGHT.

Diseases of the Genito-Urinary Apparatus.

Once a week for four months. Dr. CABOT. *Once a week for three months.*
Dr. WATSON.

Legal Medicine.

Twice a week during the first half-year. PROFESSOR DRAPER. *Demonstrations.* Dr. HARRIS.

Hygiene.

Twice a week for two months. Dr. DURGIN.

Bacteriology.

Once a week for four months. Dr. ERNST.

Cookery.

Twice a week (two hours) for one month. Boston Cooking School.

CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

The Massachusetts General Hospital. — During the past year, 3,455 patients were treated in the wards, and 19,472 in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, on four days in the week. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, and Ophthalmology.

The City Hospital. — During the past year, 5,397 cases were treated in its wards, and 13,124 in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, 800 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. Diseases of the eye, the ear, and the skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons twice a week.

In these two hospitals, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching

nearly two thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital. — More than five hundred patients are annually confined in the Hospital. In the out-patient department, attendance during confinement is also furnished to several hundred women at their homes.

The Boston Dispensary. — 35,888 patients were treated at this Public Charity during the past year. A new building has lately been erected at a cost of \$50,000, where students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of medicine and surgery.

The Massachusetts Charitable Eye and Ear Infirmary. — The thirteen thousand patients annually treated at this institution present every variety of disease of the ear and eye, and supply a large number of operations.

The Marine Hospital at Chelsea receives from the shipping of the port a large number of patients, who furnish examples of the diseases of foreign countries and of distant parts of the United States. Many cases of venereal disease, in its various forms, are treated annually.

The Free Hospital for Women. — In the wards of this institution, which is devoted exclusively to the diseases peculiar to women, abundant opportunity is offered to study the severer forms of uterine disease, and to witness operations which are performed once a week throughout the year. In the out-patient department, where about 3000 patients are annually treated, every advantage is given the student to observe the less serious forms of disease and witness a large amount of minor gynaecological surgery.

Students are also permitted to visit the Children's Hospital and the Carney Hospital on application to the physicians on duty.

There are twenty-five appointments annually for Internes in the various hospitals, and as many more for Assistants in the out-patient departments. Appointments for the Massachusetts General and City Hospitals are for the term of eighteen months, for the Boston Lying-in Hospital for four months, and for the Free Hospital for Women for nine months.

EXAMINATIONS.

The regular examinations are conducted in writing and orally, and are held at the end of each year in June, and a week before the opening of the School in September (with a few exceptions), on the studies of the preceding year.* They are held in the following order: —

* The June examination is for those only who are members of the School at the time, and for those entitled to apply for the degree.

At the End of the First Year. — Anatomy, Physiology, General Chemistry,* and Materia Medica.

End of Second Year. — Anatomy, Medical Chemistry,‡ Pathological Anatomy, and Therapeutics.

End of Third Year. — Obstetrics,† Theory and Practice of Medicine, and Surgery †; and, in addition, each candidate will be required to take examinations, amounting to two (2) hours, and chosen from the following list of elective studies, at the commencement of the year; the choice thus made is to be final. One two-hour course or two one-hour courses are to be taken, as follows: —

Ophthalmology ‡ (1 hr.), Otology (1 hr.), Dermatology (2 hrs.), Diseases of Nervous System (2 hrs.), Diseases of Children (2 hrs.), Mental Diseases (1 hr.), Gynaecology (2 hrs.), and Legal Medicine ‡ (1 hr.).

End of Fourth Year. — Each candidate must pass examinations amounting to ten (10) hours, chosen from the following list of studies, the choice to be made at the commencement of the year and to be regarded as final: —

Ophthalmology ‡ (2 hrs.), Dermatology (2 hrs.), Otology (2 hrs.), Laryngology (1 hr.), Gynaecology (2 hrs.), Diseases of Children ‡ (2 hrs.), Diseases of Nervous System (2 hrs.), Mental Diseases (1 hr.), Clinical Obstetrics (2 hrs.), Operative Obstetrics (1 hr.), Operative Surgery (1 hr.), Legal Medicine ‡ (1 hr.), Hygiene (1 hr.), Bacteriology (1 hr.).

In addition to the above examinations each student is required to present a satisfactory report of the analysis of a solution containing inorganic substances, and of a specimen of urine, to examine and report upon a clinical case in Medicine and Surgery, and to take charge of and report upon four cases in Obstetrics; each student must also have satisfactorily dissected the three parts of the body.

The above courses are entirely distinct from third-year courses of the same title; and in addition there will be given clinical and laboratory courses in Orthopaedic Surgery, Genito-urinary Diseases, Syphilis, Ovarian Tumors, Clinical Microscopy, Preparation of Food for Infants and Invalids; in these courses no examination is required.

House-officers in the Massachusetts General Hospital, Boston City Hospital, Carney Hospital, McLean Asylum, Boston Lunatic Hospital, Massachusetts Charitable Eye and Ear Infirmary, Boston Children's Hospital, and Free Hospital for Women may obtain the fourth-year degree by entering the fourth class, passing an examination in the electives amounting to five (5) hours, and presenting a certificate of satisfactory perform-

* See foot-note on page 237.

† The examinations in Obstetrics and Surgery may be passed at the end of the fourth year if preferred.

‡ The examinations in these subjects will be held at the end of the first half-year.

mance of duty in the Hospital for a period equivalent to the School year, and an acceptable thesis or clinical report based upon observations made during their service. On account of the shorter services in the Lying-In Hospital and Adams Nervine Asylum internes of these institutions will be required to pass an aggregate of seven (7) hours examination and present a certificate and thesis as above.

Medical students who desire to devote their fourth year of study mainly to advanced work in any of the laboratories of the School may obtain the fourth-year degree upon passing examinations in the elective studies aggregating five (5) hours, and presenting an acceptable thesis based on the laboratory work actually done.

Students attending the four years' course may be examined at the end of the third or fourth year, as preferred, in Clinical Medicine, Clinical Surgery, and Obstetrics. The examinations of the first two years are common to both groups of students. The final examinations at the close of the three years' course are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Theory and Practice, and Clinical Medicine, with electives as described on the previous page.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. Those who fail in any subject may again present themselves in that subject at the next regular examination.

All students are required to notify the Secretary in writing of their intention to present themselves for examination, either in June or September, one month before such examination is to be held.

The regular examinations for the year 1889-90 will begin June 3 and September 23.

The following was the order of the examinations held in June, 1889:—

Tuesday (June 4), Surgery; *Wednesday*, Chemistry; *Thursday*, Diseases of Children and Gynaecology; *Friday*, Physiology; *Saturday*, Clinical Medicine; *Monday* (June 10), Therapeutics; *Tuesday*, Materia Medica and Dermatology; *Wednesday*, Pathology; *Thursday*, Obstetrics and Clinical Obstetrics; *Friday*, Advanced Anatomy; *Saturday*, Theory and Practice and Operative Surgery; *Monday* (June 17), Clinical Surgery and Operative Obstetrics; *Tuesday*, Medical Chemistry; *Wednesday*, Descriptive Anatomy, Laryngology, Mental Diseases, Diseases of the Nervous System, and Otology.

DIVISION OF STUDENTS.

Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students

following the three years' course are classified as heretofore, and the instruction in the special branches is of the same character as that which has been given for several years. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission, and furnish (from a recognized Medical School) a satisfactory certificate of time spent in medical studies. No student may advance with his class, or be admitted to advanced standing, until he has passed the required examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed all the examinations of the first, in addition to a majority of those of the second year, or of the fourth class, until he has passed all of the examinations of the first and second, in addition to a majority of those of the third year.

In order that the time of study shall count as a full year, students of all classes must present themselves within the first week of the School year and register their names with the Secretary.

Students who do not intend to offer themselves for a degree will, however, be received for any portion of the course.

Any student may obtain a certificate of his period of connection with the School.

LIBRARIES.

The students have access, free of charge, to the books belonging to the library of the School and to the libraries of the several departments.

The College Library at Cambridge is open to the students of the Medical School.

The Boston Public Library, which contains a large collection of medical books, is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Treasurer's office, or deposited with the Treasurer the sum of fifty dollars, may also use this library.

REQUIREMENTS FOR THE DEGREE.

Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine three or four full years; have spent at least one continuous year at this School; and have passed the required examinations.

The course of study recommended by the Faculty covers four years; but, until further notice, the Degree of Doctor of Medicine will be given as heretofore, upon the completion of three years of study, to applicants who have passed satisfactorily the above requirements.

The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of seventy-five per cent* upon all the examinations above stated. A certificate of attendance on the studies of the fourth year will be given to such graduates as have attended the course, and have passed a satisfactory examination in the studies of the same.

The presentation of a thesis is not a requirement for graduation, but candidates for the degree of M.D. may present a voluntary thesis. If of conspicuous merit, it will receive honorable mention; if also of a suitable character, it may be read at the University Commencement exercises. Theses must be completed and delivered to the Dean on or before the first day of June.

The degree of Master of Arts is open to graduates of the School who are also Bachelors of Arts of Harvard College, and to Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Harvard College. Candidates must pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine. Students who have taken the four years' course, and have passed the examinations "with high credit," may obtain the degree of Master of Arts by presenting their applications to the Faculty on or before the first of June in the year of their final examinations.

ANATOMICAL PRIZE.

Professor C. B. PORTER offers a prize of fifty dollars, open to all students, and graduates of not more than five years' standing, except teachers of anatomy, for the best dissection deserving the award illustrative of surgical anatomy, the specimen to be presented to the Museum.

OTOLOGY PRIZE.

For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, in alternate years, the sum of twenty-five dollars, open to third-year students.

The prize for 1888-89 for the best preparation was awarded to George Warton Kaan.

PECUNIARY AID.

Four yearly scholarships, of the value of \$200 each, have been established by the Faculty, and are open to meritorious students who have been at the School for at least one year. The two Barringer scholarships, of the value of \$300 and \$200 respectively, will be awarded to deserving students, preferably those of the fourth class. The David Williams Cheever scholarship, of the value of \$200, will be awarded to a student of the first year. Only those needing assistance are expected to apply; and of such, those holding the highest rank will have the preference. Hold-

* In computing averages all examinations will be reduced to a basis of three hours.

ers of scholarships may be required to render assistance in laboratory courses to an amount not exceeding four hours per week.

The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is payable every other year to one or more meritorious students needing assistance.

FEES AND EXPENSES.

For matriculation, five dollars; for a year, two hundred dollars, (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, one hundred and twenty dollars; for graduation, thirty dollars. During the first two years there are the following additional expenses: Two dollars for each of the three parts required for dissection; and six dollars per year for chemical material, in addition to the charge for breakage of glass apparatus. Of students who do not pay in advance, a bond for \$300, executed by two sufficient bondsmen, one of whom must be a citizen of the United States, is required. A copy of such bond will be sent, on application to the Secretary of the Faculty, and all students are recommended to deposit such a bond. To students depositing bonds, term-bills will be presented one week before the end of the first term, to be paid within two weeks; and also one week or more before Commencement, to be paid on or before the beginning of the next academic year. Such students will be held responsible for the payment of fees until they have notified the Dean of their intention to withdraw from the School, and have subsequently received their bond from the Treasurer.* Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Faculty, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction—this remission to date from the reception by the Dean of a written notice of the student's withdrawal from the School. No degree can be conferred till all dues to the School are discharged. The student's general expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The janitor of the Medical School will always have a list of boarding-houses in the vicinity of the School building, varying in their rates of charges from five to ten dollars a week.

Fourth-Year Fees.—The fee for the full year to all students who have paid for three full courses in the School, and who are entitled to be classified in the Catalogue as fourth-year students, shall be one hundred dollars. For other students, including graduates of other schools, the fee shall be two hundred dollars. For Internes in Hospitals, who are entitled to apply

* The Treasurer's office is at 50 State St., Boston.

for the degree, the fee shall be thirty dollars for the entire year. For students engaged in special advanced work in the laboratories the fee shall be one hundred dollars.

COURSES OF STUDY FOR GRADUATES.

The Faculty has arranged a greatly enlarged and improved plan of instruction for graduates, embracing all the branches of practical and scientific medicine. It is designed to supply those opportunities for clinical and laboratory study which have hitherto been sought in Europe by young graduates and practitioners.

The new and extensive laboratories of the School are inferior to none in America, and the clinical advantages afforded by the hospitals of Boston furnish abundant material for all purposes of instruction. The following are the principal institutions:—

Massachusetts General Hospital,	Boston Lying-in Hospital,
Boston City Hospital,	The Children's Hospital,
Boston Dispensary,	McLean Asylum for the Insane,
Massachusetts Eye and Ear Infirmary,	Boston Lunatic Hospital,
Free Hospital for Women,	The Carney Hospital.

Instructors in the Medical School are members of the medical and surgical staff of these institutions, and students are admitted to all of them under their immediate supervision.

Instruction in the graduate courses is entirely distinct from that of the undergraduate department of the School; but students of the former will be admitted also to all the regular lectures (not clinical) of the latter without extra charge during their connection with the School.

Instruction will be conducted in small classes and under the personal direction of the heads of departments. The courses will be mostly of eight weeks duration, and the practitioner will be able during a brief residence to take one or several of them. Those desiring to study a specialty may pursue long, continuous courses in any single branch at reduced rates.

Instruction will be given throughout the academic year, October to June. A certificate of attendance will be furnished when desired.

FEEES.

The fees for the separate courses in the several departments vary with the courses.

Fee for two months' attendance upon all the courses,	\$100.
“ “ four months’ “ “ “ “ “	150.
“ “ attendance throughout the academic year “ “ “	200.

An extra fee is required for the use of material in laboratory, dissecting and operative courses. Matriculation, \$5.

All fees are payable in advance to the Treasurer of the University, 50 State Street.

LIST OF COURSES.

Anatomy. — The following courses are offered: —

1. The Anatomy of the Joints, illustrated by preparations, frozen sections, and the live model.
2. The Anatomy of the Central Nervous System, including Cerebral Localization and the Course of Fibres. Illustrated by preparations, models, plates, and diagrams.
3. Applied Anatomy demonstrated on the cadaver, including Surface Anatomy.
4. A Dissection Course.

Histology. — A course on Human Embryology.

Physiology. — Opportunities for carrying on original investigations in the Physiological Laboratory, which is well provided with apparatus for original research, including recording instruments of various sorts, induction coils, interrupters, galvanometers, constant temperature apparatus, photographic outfit, artificial respiration apparatus, etc.

Medical Chemistry. — Practical instruction in the Chemical Laboratory, in physiological chemistry, in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations, with the application of the microscope to these processes. Instruction in General Analysis will also be given if desired.

Pathological Anatomy. — The courses in Pathological Anatomy will consist of —

- (1) Demonstrations of Morbid Material, and Practice in the Method of Post-mortem Examinations.
- (2) Exercises in Pathological Histology.
- (3) Instruction in Clinical Microscopy.
- (4) Laboratory Opportunities for Special Investigations.

Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

Clinical Medicine. — Instruction in Clinical Medicine will consist of two courses of eight weeks, which will be fully illustrated by cases in the wards of the Massachusetts General and Boston City Hospitals, and two courses on Diseases of the Digestive Organs.

Surgery. — A course in Clinical Surgery at the Boston City Hospital in October and November at 10 o'clock on Mondays. Eight exercises.

Also a course in Clinical Surgery at the Massachusetts General Hospital in November and December; and a second course in January and February.

A course in Clinical Surgery at the Massachusetts General Hospital in October, at 12 o'clock daily, except Saturdays. Twenty exercises.

Two courses on Minor Surgery, including fractures and dislocations, at the Boston City Hospital from December till April.

Clinical Surgery, including Minor Surgery, at the Carney Hospital in October and November, at 11 o'clock on Tuesdays, Thursdays, and Saturdays.

Two courses on Clinical Surgery (including Orthopedic) at the Children's Hospital from December till March.

Courses in Bandaging and Apparatus, of seven exercises, of two hours each.

Courses of six exercises upon the cadaver, illustrating the Applied Anatomy and Technique of Examinations, Operations, &c., of Genito-urinary Surgery.

Obstetrics. — Clinical instruction in Obstetrics will be given in the wards of the Boston Lying-in Hospital on five mornings of the week during the months of November and December, and April and May. Special attention will be given to the management of convalescence after confinement, and opportunity will be given to witness labor cases and operations in the Hospital.

An abundance of out-patient cases of Midwifery will be furnished.

Practical instruction in Operative Obstetrics on the cadaver will be given at the Medical School, consisting of ten daily exercises.

Ophthalmology. — At the Boston City Hospital two courses will be given, from January till July, consisting of clinical instruction, practical exercises in diagnosis and treatment, opportunities for witnessing operations and demonstrations of the use of the ophthalmoscope and other means for determining the healthy or pathological conditions of the deep-seated structures and the transparent media of the eye, and the selection of appliances for the relief of optical defects.

Courses will also be given at the Massachusetts Charitable Eye and Ear Infirmary, the ophthalmic out-patient department of which receives between nine and ten thousand patients annually. The cataract extractions during the past year numbered 125, and the number of other operations is exceeded at no other institution of its kind in this country.

Dermatology. — Instruction in Diseases of the Skin will be given at the Skin Department of the Massachusetts General Hospital. Nearly two thousand cases are treated at this clinic yearly, which come from the New England States generally and the British provinces, and present many examples of the rare forms of cutaneous affections.

Each course will last eight weeks, and instruction will be continuous throughout the academic year, from October to June inclusive. Graduates will have opportunity for the closest examination of patients. They may also attend the systematic course of lectures on Dermatology. A large collection of Baretta's models of skin disease is open to their inspection in the Museum of the School.

Syphilis. — A course on Syphilis at the Out-Patient Department of the Boston City Hospital in January, February, and March.

Otology. — The instruction in this department will be given at the Massachusetts Charitable Eye and Ear Infirmary and at the Boston City Hospital. Each course of eight weeks' duration will include, in addition to the exhibition and explanation of cases, practical instruction in examination and diagnosis, and a systematic review of the anatomy, physiology and diseases of the ear.

The Infirmary, 176 Charles Street, offers unusual facilities for the study of ear diseases in its very large clinic, more than three thousand aural cases being treated annually. It is fully provided with receiving, operating, and lecture rooms, severe cases and those requiring serious operations being provided with beds in the house and skilled nursing.

At the City Hospital, Harrison Avenue, many of the most important operations on the ear are performed, and in addition its general and contagious wards of more than four hundred beds afford unusual opportunities for studying the aural complications of general diseases, more especially of the exanthemata, as large numbers of cases of typhoid fever, diphtheria, scarlet fever, and measles are received here every year. The courses will consist of twenty-four exercises of one hour or more each.

Gynaecology. — Instruction in Diseases of Women will be given at the Free Hospital for Women and the Boston Dispensary. The wards of the first-named Hospital afford opportunities for the study of the severer forms of uterine disease, while the Out-Patient Department of both institutions supplies abundant material for the education of the touch, and the diagnosis and treatment of all minor gynaecological diseases. There will be four courses of eight weeks each.

Graduates may also attend the course of lectures at the Medical School.

Provided six or more graduates desire an operative course, in which they may take part in the performance of the various gynaecological operations upon the cadaver, as well as acquire greater familiarity with the instruments used in minor Gynaecology, such instruction will be given from 7 till 9 P.M. each evening during the last two weeks of each of the previous courses.

Ovarian Tumors. — In this department cases for diagnosis will be shown, and both recent and preserved specimens illustrative of different

forms of abdominal tumors will be exhibited. Graduates may also have opportunities to witness laparotomies and to receive clinical teaching on the individual case then under treatment. They will also be admitted to lectures at the Medical School.

Laryngology and Rhinology. — Instruction in Diseases of the Throat and Nose will be given throughout the academic year. Each course will last eight weeks.

Each course will consist of a demonstration of the structure of the larynx and nasal passages, and practical instruction in the use of the laryngoscope and rhinoscope, and in the diagnosis and treatment of affections of the throat and nose. Both Hospitals afford excellent material.

Neurology. — Courses of twenty-four lectures each will be given on Diseases of the Nervous System, at the Out-Patient Department of the Massachusetts General Hospital. The material afforded by this clinic, which receives patients from all over New England, is ample; the Department is well provided with means for the investigation of cases; the courses will be abundantly illustrated by diagrams and microscopic preparations as well as by the exhibition of patients, and will include instruction in the use of electricity in diagnosis and treatment.

Mental Diseases. — Instruction in Mental Diseases will be given at the McLean Asylum for the Insane during February and March. The daily average number of patients is 169.

Also at the Boston Lunatic Hospital during the months of April and May. The Hospital contains 200 patients.

Diseases of Children. — Instruction in Diseases of Children will be given at the City Hospital, Children's Hospital, Infant Hospital and West End Nursery, Boston Dispensary (Children's Room), and in the Dispensary Districts, throughout the year.

The material which can be made use of in this course is very large in amount, comprising not only the more common forms of disease met with by the physician in his every-day practice, but also the rare forms.

The new wards at the City Hospital, built especially for the reception of cases of scarlet fever and diphtheria, offer exceptional advantages for studying the diagnosis and treatment of these diseases.

Legal Medicine. — Instruction in Legal Medicine will be given at the City Hospital. Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

Hygiene. — Practical instruction will be given in the Laboratory at the Medical School in the analysis of air, water, soils, and of articles of food

and drink for adulterations. Opportunities will also be afforded for special work. Attention will also be given to the sanitary inspection of houses, public buildings, and premises of offensive trades, and to the investigation of ventilation, plumbing, etc.

Bacteriology. — The courses in Bacteriology will consist of instruction in the methods of research, together with opportunities for original investigation. The means of illustration and facilities for work are those of a well-equipped laboratory.

Those pursuing these courses may elect the studies to which they will give their attention, and allot the time they will devote to each. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on the courses pursued. On payment of the full fee for the year, they will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University.

Graduates of other medical schools may obtain the degree of M.D. at this University, after a year's study in the graduates' course. The required examinations are those of the three years' course, and may be passed in such order as is desired, but only at the stated seasons.

For further information and full description of the courses, address Dr. H. P. BOWDITCH, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.

SUMMER COURSES.

During the summer of 1890 courses in many branches of practical and scientific medicine will be given by some of the teachers of the School. These courses will be clinical in character and will be given at the Hospitals and Dispensaries by the physicians and surgeons on duty. Practical instruction will also be given in several of the Laboratories at the School by the instructors in charge.

A detailed list of the Summer Courses will soon be announced. For further information address Dr. H. P. BOWDITCH, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.

BOYLSTON MEDICAL PRIZES.

These prizes, open to public competition, are offered annually for the best dissertations on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting of 1889 it was voted that a prize of two hundred dollars be awarded to Charles V. Chapin and Gardner T. Swarts, of Providence, R. I., for a dissertation entitled *May the cause of Typhoid Fever in the Human species originate in Animals other than Man?*

No prize was awarded to any dissertation on the second subject proposed for 1889.

For 1890 two prizes are offered:—

1. A prize of two hundred dollars for the best dissertation embodying *The results of Original Work in Anatomy, Physiology or Pathology.* The subject to be chosen by the writer.

2. A prize of two hundred dollars for the best dissertation on *The Actions, Uses, and Values Antipyretics.*

Dissertations on these subjects must be sent post-paid to W. F. WHITNEY, M.D., Harvard Medical School, Boston, Mass., on or before *Wednesday, April 2, 1890.*

For 1891 two prizes are offered:—

1. A prize of two hundred dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology or Pathology.* The subject to be chosen by the writer.

2. A prize of one hundred dollars for the best dissertation on *The characteristic Appearance of Lesions produced by Weapons, and the differential Diagnosis of their Production on the living and dead human Body.* A study in legal medicine.

Dissertations on these subjects must be sent to the same address as above on or before *Wednesday, April 1, 1891.*

In awarding these prizes preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear in place of its author's name some sentence or device and must be accompanied by a sealed packet bearing the same sentence or device and containing within the author's name and residence. *Any clew by which the authorship of a dissertation is made known to the committee will debar such dissertation from competition.*

Dissertations must be written in a distinct and plain hand, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes : —

1. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2. That in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows, and consists of the following physicians : — ROBERT T. EDES, M.D., *President*, SAMUEL G. WEBBER, M.D., H. P. BOWDITCH, M.D., FRANK W. DRAPER, M.D., J. COLLINS WARREN, M.D., EDWARD S. WOOD, M.D., WILLIAM F. WHITNEY, M.D., *Secretary*, F. H. WILLIAMS, M.D.

The address of the *Secretary* is WILLIAM F. WHITNEY, M.D., Harvard Medical School, Boston, Mass.

The following tabular view illustrates the distribution of studies throughout the year.

1889-90, FROM SEPTEMBER 26 TO JUNE 30.

First Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy, L. Prof. Dwight, Lect. Room C.	Anatomy L. Prof. Dwight, Lect. Room C.	Anatomy, L. Prof. Dwight, Lect. Room C.		*Anatomy, R. Drs. Conant & Newell, Lect. Room E & D.	† Embryol. 8 L. Asst. Prof. C. S. Minot, Lect. Room B.
10	† Histology, L. Asst. Prof. C. S. Minot, Lect. Room B. † Materia M., L. Dr. C. Har- rington, Lect. Room A.	{ Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy. Laborat. }	{ *Practical Physiol. Dr. J. W. Warren. Physiol. Laborat. }	{ Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy. Laborat. }	† Materia M. Dr. C. Har- rington, Lect. Room B.	Physiol. R. Dr. J. W. Warren, Lect. Room A.
11	Physiol. L. or Conf. Dr. J. W. War- ren, Lect. Room A.			Chemistry, L. Asst. Prof. Hills, Lect. Room A.	Physiol. L. Dr. J. W. War- ren, Lect. Room A.	{ Chemis. R. or L. Prof. Hills, Lect. Room A 1st 10 w. *Pract. Physiol. Dr. J. W. Warren. Ph. Lab. }
12		Physiol. L. Dr. J. W. War- ren, Lect. Room A.	Chemistry, R. Asst. Prof. Hills, Lect. Room A.		† Hygiene, L. Dr. Harring- ton, Lect. Room A or B.	
2	Laboratory. † Chemis., L. Prof. Wood, Lect. Room A.	Laboratory.	Laboratory. † Chemis., L. Prof. Wood, Lect. Room A.	{ *Practical Physiol. Dr. J. W. Warren, Physiol. Laborat. }	Laboratory.	
3	Laboratory.	Laboratory.	Laboratory.		Laboratory.	
4		Laboratory.	Laboratory.		Laboratory.	
5	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	

* In sections.

† During first half year.

‡ During second half year.

Clinical Surgery at M. & C. in sections, of which due notice will be given.

A. = McLean Insane Asylum; C. = Boston City Hospital; Ch. = Children's Hospital; Cl. = Clinic; D. = Boston Dispensary; E. = Eye and Ear Infirmary; L. = Lecture; Ly. = Boston Lying-in Hospital; M. = Massachusetts General Hospital; O.P.Cl. = Out Patient Clinic; R. = Recitation; S. = Samaritan Home; S.B. = So. Boston Insane Asylum; W. = Free Hospital for Women.

These abbreviations refer to the following as well as to the above tables.

Second Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, N. Grove St.
9	Clin. Med. Prof. Shat- tuck, M. G. H.	Clin. Med. Dr. Mason, B. C. H. Bost. Disp.	Clin. Med. L. Dr. Vickery, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Dr. Mason, B. C. H. Bost. Disp.	Clin. Med. Prof. Shat- tuck, M. G. H.
10	†Laryngo'py. Prof. Knight, M. G. H.	†Laryngo'py. Clin. Surg. Prof. Cheever, B. C. H.	†Laryngo'py. Laboratory. Drs. Wood & Emerson.	†Laryngo'py. Laboratory. Drs. Wood & Emerson.	†Laryngo'py. B. C. H. Surg. Visit.	†Laryng'py. M. G. H. Surg. Visit.
11	*Auscultation Drs. Garland, Gannett, & Withington, M. G. H., Bost. Disp., & B. C. H.	*Auscultation Therapeutics. Asst. Prof. F. H. Williams, B. C. H.	*Auscultation Cl. Conf. Child. Asst. Prof. Rotch, Mar. & Apr. No. Grove St.	*Auscultation	*Auscultation B. C. H. Operations.	*Auscult. M. G. H. Operations.
12	Clin. Sur. after Nov. Profs. Porter & Warren.	Paediatrics. Asst. Prof. Rotch, Mar. & Apr. Lect. Room B.	Surg. Conf. Prof. Porter, M. G. H. after Nov.	Adv. Anat. L. Prof. Dwight, Lect. Room C.	Pathology, L. Prof. Fitz, Lect. Room C.	Museum.
2	§Chemistry, L. Prof. Wood, Lect. Room A.	{ Path. Histol. Drs Whit- ney & Gannett, Laborat. }	Chemistry, R. Prof. Wood, Lect. Room A.	†Bact'y. 6 L. Dr. Ernst, Lect. Room B.	{ Path. Histol. Drs Whit- ney & Gannett, Laborat. }	
3	Pathology. R. & Dem. Prof. Fitz, Laboratory.		Pathology, L. Prof. Fitz, Lect. Room C.	Pathology. Dem. & R. Prof. Fitz, Laboratory.		
4	Therapeutics. Asst. Prof. F. H. Williams, Lect. Room A.	Theo. & Pr. R. Dr. Cutler, Lect. Room E.	Therapeutics, Asst. Prof. F. H. Williams, Lect. Room A.	Theo. & Pr. R. Dr. Cutler, Lect. Room E.	Clin. Conf. Prof. Shat- tuck, Drs. Mason, Garland, and Vickery, Lect. Room C.	
5	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	

* Till February in sections.

† In first half-year.

‡ Till January in sections.

§ Examination in February.

Third Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Clin. Med. Prof. Shattuck, M. G. H.	Clin. Med. Dr. Mason, B. C. H. Boston Disp.	Clin. Med. Prof. Shattuck, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Dr. Mason. Ophthal. Cl. Prof. Williams Clin. Otol. Jan.—Mar. Prof. Green, B. C. H.	Clin. Med. Prof. Shattuck, M. G. H.
10		Surg. Cl. Prof. Cheever. Oct. till Apr. B. C. H. Gynaecol. Cl. Boston Disp.	Cl. Dermatology. Prof. White, M. G. H.	Dis. of Nerv. System. Dr. Putnam, M. G. H.	Surg. Visit. B. C. H. Gynaecol. Cl. Boston Disp. till April.	Surg. Visit. M. G. H.
11			§ Diseases of Children. Asst. Prof. Rotch. No. Grove St.	Cl. E. & E. Inf. Jan. Feb. Mar. Prof. Blake.	Operations, B. C. H. Child. Dis. Asst. Prof. Rotch. Lect. Room B. Oct. & Mar.—June, Disp. Nov.—Mar.	Operations. M. G. H.
12	Surg. Cl. M. G. H. after Nov. Profs. Porter and Warren.	Surg. Anat. L. Mar. & Apr. Prof. Porter, Lect. Room D.	Surg. Conf. Prof. Porter. after Nov. M. G. H.	Surg. Cl. M. G. H. after Nov. Profs. Porter and Warren.	† Syphilis. Dr. Post, Boston Disp. Surg. Anat. L. Mar. & Apr. Prof. Porter, Lect. Room D.	Museum.
2	Gynaecol. L. Prof. Baker, Lect. Room B.		* Legal Med. § Asst. Prof. Draper, Lect. Room E.	* Ophthal. L. Prof. Williams Lect. Room A.	* Legal Med. Asst. Prof. Draper, Lect. Room E.	
3	Theo. & Prac. L. Prof. Minot, Lect. Room E.	* Ophthalmology, L. § Prof. Williams, Lect. Room A. † Mental Dis. Dr. Fisher, Lect. Room A.	Obstetrics, L. Prof. Richardson, Lect. Room B.	Theo. & Prac. L. Prof. Minot, Lect. Room E.	Obstetrics, L. Prof. Richardson, Lect. Room B.	Ment. Dis. Clinic. † Bos. Lun. Hosp. Dr. Fisher. Sch. f. Feeb. Mind. Chil. Jan. & Feb.
4	Surgery, L. Prof. Warren or Cheever, Lect. Room C.	Dermatology, L. Prof. White, Lect. Room B.	Surgery, L. Prof. Warren till Jan. Lect. Room E.	Surgery, L. Prof. Cheever, Lect. Room C.	Clinical Conf. Prof. Shattuck, Drs. Mason, Garland, and Vickery, Lect. Room C.	
5	Otol. L., Oct., Nov., Dec., Lect. Room B. Profs. Blake and Green, Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D. Obstetrics, R. Dr. Green, Lect. Room B.	Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	Otol. L., Oct., Nov., Dec., Lect. Room B. Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	

* During first half year.

† During second half year.

‡ Until March 1.

§ Examination in February.

OCTOBER.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Prof. Fitz, Medical Visit (12) M. G. H.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Prof. Fitz, Medical Visit (12) M. G. H.
10	Asst. Prof. Rotch, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Asst. Prof. Rotch, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (4) Lying-in Hosp. Dr. Greenough, Syphilis (5) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Prof. Richardson, Clin. Obstet. (3) Lying-in Hosp.	Dr. Garland, Medical Clinic (c) Dispensary.
12		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
3	Asst. Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (2) Free Hospital.	Asst. Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
4	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

NOTE. — The time at which each exercise begins is shown in the margin at the left of each page; the time of its ending is subject to the instructor's convenience.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Medical Clinic (e) M. G. H.	Prof. Williams, Eye Diseases (e) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear. Inf.	Prof. Williams, Eye Diseases (e) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.
10	Asst. Prof. Rotch, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Dis. (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Asst. Prof. Rotch, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Dis. (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (4) Lying-in Hosp. Dr. Greenough, Syphilis (6) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Prof. Richardson, Clin. Obstet. (4) Lying-in Hosp.	Dr. Watson, Genito-Urinary Diseases (6) Dispensary. Dr. Garland, Medical Clinic (e) Dispensary.
12		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
2					Dr. Cowles, Mental Dis. (6) McLean Asylum.	
3	Asst. Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (2) Free Hospital.	Asst. Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Strong, Women's Disp. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

The numbers in parentheses indicate the maximum number of students who will be admitted to the several exercises; the membership of the sections is determined by the instructors. At the exercises marked (c) the whole class may attend together.

DECEMBER.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, Eye Diseases (e) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Dr. Gannett, Medical Clinic (e) M. G. H.	Prof. Williams, Eye Diseases (e) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (e) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.
10	Asst. Prof. Rotch, Child. Dis. (e) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary. Dr. Burrell, Surg. Clinic (10) City Hospital.	Asst. Prof. Rotch, Child. Dis. (e) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (4) Lying-in Hosp. Dr. Greenough, Syphilis (6) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Prof. Richardson, Clin. Obstet. (4) Lying-in Hosp.	Dr. Watson, Genito-Urinary Diseases (6) Dispensary. Dr. Garland, Medical Clinic (e) Dispensary.
12		Dr. Cabot, Genito-Urinary Diseases (e) M. G. H.				
2					Dr. Cowles, Mental Dis. (6) McLean Asylum.	
3	Asst. Prof. Draper, Legal Med. (e) College.	Prof. Baker, Women's Dis. (2) Free Hospital.	Asst. Prof. Draper, Legal Med. (e) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
4	Dr. Bradford, Orthopedic Surgery (e) Children's Hosp.	Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (e) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

JANUARY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Green, Ear Diseases (4) Eye & Ear Inf. Medical Clinic (e) M. G. H. Dr. Gannett,		Prof. Green, Ear Diseases (4) Eye & Ear Inf.		Prof. Green, Ear Diseases (4) Eye & Ear Inf.
10	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Elliot, Women's Dis. (3) Dispensary. Dr. Burrell, Surgical Clin. (10) City Hospital.	Prof. Knight, Dis. of Throat (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Elliot, Women's Dis. (3) Dispensary.
11	Dr. Greenough, Syphilis (6) Dispensary. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Dr. Greenough, Syphilis (6) Dispensary. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Prof. Warren, Surgical Visit (e) M. G. H.	Dr. Watson, Genito-Urinary Diseases (6) Dispensary.
12		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
2			Asst. Prof. Draper, Legal Med. (c) College.		Dr. Cowles, Mental Dis. (6) McLean Asylum.	
3	Asst. Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (2) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
4		Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Homans, Ovar. Tumors (e) College.		Dr. Strong, Women's Dis. (2) Free Hospital.	

FEBRUARY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
10	Prof. Knight, Dis. of Throat (6) M. G. II. Dr. Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. II.	Prof. Knight, Dis. of Throat (6) M. G. II. Dr. Burrell, Surg. Clinic (10) City Hospital.	Prof. Knight, Dis. of Throat (6) M. G. II. Dr. Tilden, Gen.-Urin. Dis. (4) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. II.	Prof. White, Skin Diseases (15) M. G. II.	Prof. Knight, Dis. of Throat (6) M. G. II. Dr. Walton, Nervous Dis. (6) M. G. II.
11	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. II.	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.		Prof. Warren, Surgical Visit (c) M. G. II.	Dr. Doe, Women's Dis. (4) City Hospital.
3	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (2) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4		Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Homans, Ovar. Tumors (c) College.		Dr. Strong, Women's Dis. (2) Free Hospital.	
7	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*

* After February 14.

MARCH.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9					Dr. Vickery, Medical Clinic (6) M. G. H.	
10	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Burrell, Surgical Clin. (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Burrell, Surgical Clin. (10) City Hospital.	Prof. Knight, Dis. of Throat (6) M. G. H. Dr. Tilden, Genito-Urinary Diseases (4) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (5) M. G. H. Dr. Walton, Nervous Dis. (6) M. G. H.
11	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.			Dr. Garland, Medical Clinic (c) Dispensary. Dr. Doe, Women's Dis. (4) City Hospital.
3	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (2) Free Hospital.	Dr. Ernst, Baeteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4		Dr. Strong, Women's Dis. (2) Free Hospital.			Dr. Strong, Women's Dis. (2) Free Hospital.	

APRIL.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, Eye Diseases (c) City Hospital.		Prof. Williams, Eye Diseases (c) City Hospital.		Dr. Vickery, (6) Medical Clinic (6) M. G. H.	
10		Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital.	Dr. Tilden, Genito-Urinary Diseases (4) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, (15) Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital. Dr. Walton, Nervous Dis. (6) M. G. H.
11	Prof. Richardson, Clin. Obstet. (3) Lying-in Hosp. Dr. Gay, Surg. Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.		Prof. Richardson, Clin. Obstet. (3) Lying-in Hosp.	Dr. Garland, Medical Clinic (c) Dispensary. Dr. Doe, Women's Dis. (4) City Hospital.
3		Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (2) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4	Prof. Porter, Operative Surgery (c) College. (After April 15.)	Dr. Strong, Women's Dis. (2) Free Hospital. Prof. Porter, Operative Surgery (c) College. (After April 15.)	Prof. Porter, Operative Surgery (c) College. (After April 15.)	Prof. Porter, Operative Surgery (c) College. (After April 15.)	Dr. Strong, Women's Dis. (2) Free Hospital. Prof. Porter, Operative Surgery (c) College. (After April 15.)	Prof. Porter, Operative Surgery (c) College. (After April 15.)

MAY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (3) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (3) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (6) Eye & Ear Inf.
10		Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital. Dr. Walton, Nervous Dis. (6) M. G. H.
11	Prof. Richardson, Clin. Obstet. (3) Lying-in Hosp. Dr. Gay, Surgical Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.		Prof. Richardson, Clin. Obstet. (3) Lying-in Hosp.	Dr. Garland, Medical Clinic (c) Dispensary. Dr. Doe, Women's Dis. (4) City Hospital.
3		Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (2) Free Hospital.	Cooking School. (c)	Prof. Baker, Women's Dis. (16) Free Hospital.	Cooking School. (c)	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4		Dr. Strong, Women's Dis. (2) Free Hospital.				

EXAMINATION PAPERS.

(June Examination, 1889.)

First Year's Studies.

ANATOMY. — Professor DWIGHT.

1. What kind of epithelium (*a*) in the oesophagus, (*b*) in the stomach, (*c*) in the Fallopian tube, (*d*) in the bladder?
2. In which cranial bone is the *crista galli*?
3. In which cranial bone is the posterior condyloid foramen, and what goes through it?
4. The origin and insertion of the round ligament of the hip?
5. Describe the psoas.
6. How large is the pyloric orifice of the stomach?
7. What arteries supply the stomach?
8. What kind of muscle (if any) is found in the small intestines, and how is it arranged?
9. What is the course of the right spermatic vein?
10. What nerves supply the tongue, and what part of it does each supply?

PHYSIOLOGY. — Professor BOWDITCH.

[Number the answers to the questions without copying the questions themselves. Do not number the pages of the book. Answer the questions in order, writing on each page in succession.]

1. Define potential energy and illustrate by physiological examples.
2. What is the difference between animal and vegetable food with regard to the nutriments which they contain?
3. What processes analogous to digestion occur in plants?
4. Describe intestinal absorption, with a diagram of a villus.
5. Describe the variations in the tension and rapidity of the blood in different parts of the circulatory system.
6. What proof is there of the existence of muscular, as distinct from nervous, irritability?
7. How does the nervous system influence secretion?
8. What is the difference between a voluntary and a reflex action?
9. How does the medulla oblongata influence respiration?
10. Describe the mechanism of accommodation.
11. How does the muscular sense aid the other senses? Give examples.
12. What is the function of the kidneys?

GENERAL CHEMISTRY. — Professor HILLS.

1. Define: quantivalence; allotropism; isomerism; compound radical. Illustrate.
2. Write the equations representing the manufacture of H_2 , O_2 , CO_2 , HCl , HNO_3 .
3. Source, properties, and uses of iodine.
4. Color and solubility in water of potassium iodide; chromium trioxide (chromic acid); zinc oxide; epsom salts; iodoform; salicylic acid; sodium salicylate; carbolic acid; alcohol; ether.
5. Sources of hydrocyanic acid and the cyanides. Properties and uses of potassium cyanide.
6. Urea; physical and chemical properties. Source in the economy.
7. Describe: zinc chloride; tartar emetic; chloroform.
8. What are ptomaines? Their important relations.
9. What indications may the closed-tube test give in the presence of: lead nitrate; zinc oxide; arsenious acid; corrosive sublimate; calomel?
10. Why must the organic matter of an unknown substance be destroyed before the examination for most of the metallic elements? Two methods for the destruction of organic matter.

MATERIA MEDICA. — Dr. HARRINGTON.

1. Define: massa, oleoresin, decoction, ceratum. What are "official" drugs?
2. What are the active principles of (1) cannabis indica? (2) stramonium? (3) hyoscyamus? (4) senega? (5) guarana? (6) belladonna? (7) cinchona? (8) ipecac? (9) hydrastis? (10) oleum Gaultheriae?
3. Mention the ingredients of (1) pulvis morphinae compositus, (2) mistura cretae, (3) infusum sennae compositus, (4) extractum colocynthis compositus, (5) linimentum ammoniae.
4. Mention methods of administration of (1) amyl nitris, (2) oleum morrhuae, (3) pepo, (4) oleum ricini, (5) oleatum hydrargyri, (6) apomorphinae hydrochloras. What are the principal uses of oleum theobromae, acidum oleicum, and petrolatum? Why may not opium preparations be given with infusions containing tannin?
5. Mention the ingredients of (1) unguentum diachylon, (2) syrupus scillae compositus, (3) pulvis jalapae compositus, (4) linimentum calcis, (5) pilulae catharticae compositae.
6. Write prescriptions for (1) pepsin, (2) wine of ipecac, (3) tartar emetic, (4) trituration of elaterium, (5) santoninate of sodium, (6) citrate of iron and quinine, (7) Fowler's solution, (8) ergot, (9) Dover's powder, (10) rhubarb (powder).

7. Mention the doses of (1) castor oil, (2) laudanum, (3) paregoric, (4) chloral, (5) cod-liver oil, (6) phosphate of sodium, (7) iodide of potassium, (8) tincture of nux vomica, (9) tincture of digitalis, (10) tincture of the chloride of iron.

8. Doses and solubility (in water) of (1) subnitrate of bismuth, (2) acetate of potassium, (3) carbonate of lithium, (4) tartrate of iron and potassium, (5) red iodide of mercury, (6) salicin, (7) bromide of potassium, (8) sulphate of quinine, (9) arsenious acid, (10) salicylate of sodium.

9. To what do the vegetable astringents owe their activity? How does denarcotized opium differ from ordinary opium? What is the alcoholic strength of brandy? whiskey? white wine? What is the proper percentage of morphine in opium? Why may not the iodide and chlorate of potassium be given together? What form of mercury is used in *massa hydrargyri*? in *hydrargyrum cum creta*? Describe the method of peptonizing milk.

10. Criticise the following prescriptions:—

(1) ℞ Ferri iodidi saccharati, ℥ij.
Div. in pil. No. 50.
Sig. 2 pills thrice daily.

(2) ℞ Magnesii sulphatis, ℥ij.
Aquae camphorae, ℥vj.
M. et sig.

A wineglassful in the morning to be followed by a tumbler of water.

(3) ℞ Olei phosphorati, ℥iv.
Sig. Teaspoonful before meals.

(4) ℞ Acidi carbolici, ℥viiij.
Aquae, Oviij.
M.

Sig. "Disinfectant solution."

(5) ℞ Hydrargyri chloridi mitis, ℥v.
Aquae destillatae, ℥iv.
M. Sig. Dose, a teaspoonful.

Second Year's Studies.

MEDICAL CHEMISTRY.—Professor Wood.

1. What conditions are characterized by a long-continued large amount of urine of a pale color and low Sp. Gr.?

2. How estimate the amount of chlorine in the urine? Under what conditions is the amount of chlorine diminished?

3. How determine the amount of albumen? What variation takes place in the amount of albumen in the urine during the progress of a case of acute nephritis? Of chronic parenchymatous nephritis?

4. How distinguish by an examination of the urine between active hyperaemia of the kidneys and acute nephritis? Between passive hyperaemia and interstitial nephritis?

5. What inferences can be drawn from urine having the following characteristics? Why?

Color = pale. Reaction = acid. Sp. Gr. = 1011. Amount of sediment = slight.

U. h. = —. \bar{U} . = —. Cl. = sl. — E. P. = —.
Ind. = n. \bar{U} . = n. Sf. = n. A. P. = —.

Alb. = large trace. Bile and sugar absent.

Sediment = chiefly hyaline and finely granular casts. Few granular casts. Many of the casts of large diameter, and few with granular and fatty renal cells and a few oil globules adherent. Little free granular and fatty renal epithelium.

Total amount of urine	=	2580 cc.
“ “ “ urea	=	22.47 grm.
“ “ “ chlorine	=	6.55 “
“ “ “ P ₂ O ₅	=	1.47 “
“ “ “ albumen	=	3.25 “

*Acromy from acute.
Chronic
Subacute
Neph.*

6. Describe the varieties of renal casts. How distinguish between uric acid and cystine crystals?

7. How detect lead and arsenic in urine in cases of chronic lead or arsenic poisoning?

8. Symptoms and post-mortem appearances of strychnine poisoning?

PATHOLOGICAL ANATOMY. — Professor FITZ.

1. Distinguish between coagulative and colligative necrosis.
2. State the remote and immediate causes of gangrene.
3. Explain the relation between cachexia and malignant tumors.
4. Describe the appearances characteristic of tubercular meningitis.
5. State the possible results of a chronic inflammation of the middle ear.
6. Describe the appearances of an acute, fibrinous pericarditis.
7. Discriminate between heart-clots and cardiac thrombi.
8. State the possible, immediate causes of death from aneurism of the arch of the aorta.
9. Enumerate the several varieties of pulmonary cavities with reference to cause.
10. Differentiate between the appearances of a hepatized and an atelectatic lung.
11. State the differing appearances in ascites and serous peritonitis.
12. Describe the condition of the spleen in acute pneumonia.
13. Explain the method of origin of cyanotic induration of the kidney.
14. Describe the appearances and state the effect of multilocular cystic disease of the kidney.
15. State the significance to be attached to an enlargement of the epididymis.
16. Describe the appearances of acute yellow atrophy of the liver.
17. Explain the method of origin of dropsy of the gall-bladder.

18. Describe the alteration of the stomach due to post-mortem softening.
19. Enumerate the causes of obstruction of the small intestine in the order of relative frequency.
20. Enumerate the varieties of stricture of the rectum.

TOPOGRAPHICAL AND ADVANCED ANATOMY.

Professor DWIGHT.

1. Describe the relations of the heart to the walls of the chest and to the internal structures around it.
2. Describe the scrotum and its contents, giving the relations.
3. Describe the shoulder joint and its relations to muscles, vessels, and nerves.
4. Describe the soft parts in the sole of the foot, giving their relations.

Third Year's Studies.

THERAPEUTICS. — Assistant Professor F. H. WILLIAMS.

1. Physiological action and uses of atropine.
2. Which diuretics increase the solids, and which increase the water, of the urine?
What is the action of acetate of potassium?
3. Uses of counter irritants and the most convenient ways of applying them.
Compare dry heat and pilocarpine as diaphoretics.
4. Uses of digestive ferments and precautions.
5. Use of cold in fevers.
6. Opium: uses and precautions.
7. Local action of hydrochlorate of cocaine; uses and precautions.
Elimination of iodide of potassium, quinine, alcohol, chloral.

OBSTETRICS. — Professor W. L. RICHARDSON.

1. Give a general idea of the internal appearance of the gravid uterus at the end of the second month.
2. A woman six months pregnant has a pneumonia of the right lung. Prognosis as regards the pneumonia, and also as regards the pregnancy. Outline the treatment of the case.
3. Describe the mechanism of labor, the head presenting with the occiput to the left and posterior.
4. Describe the mechanism of labor in a face presentation, the chin being posterior.
5. When is the operation of version indicated? When contra-indicated?
6. What are the various methods of inducing labor? Discuss the relative advantages and disadvantages of these various methods.

7. A woman six months pregnant falls down stairs and the membranes are ruptured. She sustains no other injury and is in no pain. What should be your treatment of such a case? What will probably be the future course of the case?

8. Give the prodromic symptoms of puerperal eclampsia in the probable order of their occurrence. Treatment of these symptoms.

9. Treatment of puerperal septicæmia?

10. When are intra-uterine antiseptic injections called for? Describe in detail the method of giving them.

SURGERY. — Professor CHEEVER.

1. Describe the inhalation of sulphuric ether for anaesthesia; general precaution; dangers; consequences.

2. The etiology of suppuration: what are its causes, and the conditions under which they act?

3. Fracture of the shaft of the femur: describe symptoms; varieties; treatment; results.

4. What are the rules for determining the position of a tumor in the motor region of the brain?

5. Describe the modes of treating an aneurism surgically; the process of the cure; the dangers.

6. What are the causes and treatment of chronic obstruction of the intestines?

7. Acute prostatitis: abscess of prostate; tubercle; cancer; chronic enlargement.

8. The diagnosis of cancer of the breast in its early stages.

9. Fistula in ano: varieties; diagnosis; treatment.

10. When and how do you search for a ball? how do you treat penetrating gunshot wounds of the abdomen?

CLINICAL SURGERY. — Professor PORTER.

CASE I. — Patient aged 20 years. Family history good. Father and mother still alive and in good health. Personal history excellent previous to present trouble. Never used alcohol or tobacco. No venereal history. Never any sickness except measles when young. No injury.

History of disease. — Eight months ago first noticed a swelling in the left testicle, which continued to increase in size for four or five weeks. No pain. No tenderness. There was a feeling of weight, for which he used a suspensory. A month ago he consulted a physician, who ordered a poultice to the testicle, and finally lanced it, letting out a "whitish discharge." This has continued, sometimes thick and sometimes thin, always trifling in amount. At about the time of the operation the other testicle became larger, and he noticed a "lump in it."

Physical examination. — Patient well nourished. Well developed. Good appetite. No pain. Left testicle with slight collection of fluid in

upper part of scrotum. Testicle feels hard, and the epididymis seems blended with the body of the testicle. Marked pressure elicits no expression of pain. At lower and posterior part of scrotum there is a sinus leading into testicle from which comes a slight, thin discharge.

Right testicle not enlarged, but in the lower and back part is nodular lump, neither painful nor tender. No thickening of the scrotum. No enlargement of inguinal glands.

No discharge from the penis.

Examination by rectum showed some enlargement of prostate, and the seminal vesicles felt large and nodular. No tenderness of the parts.

Examination of thoracic and abdominal organs negative. Temp. and pulse normal. Micturition when the patient was up and about more frequent than normal. No vesical tenesmus.

Examination of urine. — Color pale. React. acid (slt.). Sp. gr. 1013. Albumen a trace. Pus much. Slt. amt. blood. Numerous epithelial cells of the neck.

a. What pathological process is here present?

b. What will be the probable subsequent clinical history in such a case?

c. What treatment would you advise?

CASE II. — What are the symptoms of fistula in ano?

What is the course of the disease?

What is the treatment?

What the prognosis?

CASE III. — What are the symptoms of internal hemorrhoids?

What the causes?

What the treatment?

What the prognosis?

THEORY AND PRACTICE. — Professor F. MINOT.

1. State the causes, the symptoms, and the treatment of aortic stenosis and aortic insufficiency.

2. What are the varieties, the symptoms, and the treatment of myocarditis?

3. Give the diagnosis of chronic bronchitis, and its treatment.

4. Give an account of hydatid tumor of the liver.

5. What are the symptoms and the treatment of leukaemia?

6. Describe a case of Addison's disease of the supra-renal capsules.

7. Give an account of epilepsy, with the treatment.

8. Give the differential diagnosis of cerebral apoplexy, uraemic coma, diabetic coma, opium poisoning, and alcoholic intoxication.

9. Give the symptoms, the diagnosis, and the treatment of emphysema of the lungs.

CLINICAL MEDICINE.

Professor SHATTUCK.

[Give the differential diagnosis, the prognosis, and the treatment of as many of these cases as the time will allow, discussing them in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but as omissions, intentional or not, may occur, state them if essential. Success will depend more upon the quality than upon the quantity of the work. The intelligent discussion of the cases will have more weight than a hasty and inconclusive though correct diagnosis.]

CASE 1. — A lady, 44 years old, for seven years a resident of a malarial region, is seen in consultation in May, '88. Her father died of "paralysis" when about 50; the family history is otherwise unimportant. She has been married 14 years, soon after marriage miscarried once at the third month, and has never since been pregnant; but the catamenia have been regular until two months ago, since then absent. Apart from malarial attacks from which she has suffered since she moved to her present place of residence, her health has been good; as the wife of a clergyman she has been active in parish work, beside doing all her own housework for long periods. She herself thinks she was pretty well the previous summer and autumn, but in this opinion her family physician does not agree. Since Christmas there is no doubt that she has been gradually failing in strength and losing color; she can now only get down stairs, and that with difficulty. Shortness of breath, palpitation, cough with slight expectoration have gradually assumed prominence. Pain has been absent; loss of flesh slight. There have been occasional "fever turns" during the past months. She sleeps and digests fairly well, the appetite is poor, the bowels sluggish.

Pallor of the skin and visible mucous membranes is striking; the face is somewhat puffy; ascites, if present, is slight; there is moderate though soft oedema of the legs. There are spots of brownish pigmentation on the backs of the hands; the areolae of the nipples are deeply pigmented, to a less degree the folds of the axillae. The face and oral mucous membrane are free; the hair is dark. No glands are to be felt: there is no tenderness over the sternum or long bones; examination of the abdominal viscera is negative; the urine contains no albumen. Resonance is deficient over the bases of both lungs behind, where medium moist rales are abundant. The cardiac impulse is in the fifth left space and mammillary line; the area of cardiac dulness is somewhat increased transversely: limited to the mitral area a slight murmur precedes the first sound, which is distinct; the second sound is rather louder in the second left than in the second right interspace. A recent ophthalmoscopic examination revealed the presence of retinal haemorrhages. No fever at present. A drop of blood examined under the microscope showed that the red cells were deficient in color and varied in size and shape: there was no notable increase in the white.

CASE 2. — A man of 65, of great natural vigor, has been extremely intemperate in the use of alcoholic stimulants for many years, and has enjoyed good health till two years ago, when, after great exposure in a snow storm, his legs began to grow weak. This weakness has increased more rapidly of late, and he is now nearly helpless, passing much of the

time in bed. Diarrhoea has been recently a prominent symptom, but is now under control. The stream of urine is sometimes hard to start; the urine itself is said by the attending physician, a competent man, to be negative. The pulse is rapid, regular, compressible; the tongue is clean; the temperature is normal. The pupils respond to light; no facial paralysis is noted. There is marked anaesthesia and analgesia in the legs, with wasting of the muscles, motor paresis, and loss of the knee jerk, but no ataxia. Paraesthesia of the hands. The abdomen is apparently distended but generally resonant; there is a firm and resistant mass, somewhat uneven in surface, to be felt below the right ribs and at the epigastrium.

CASE 3. — S., married, 61 years of age, a small contractor who has been in the habit of working himself with his men, lost his father at the age of 46 from gastric cancer, so he says. His mother is alive, five of his eight brothers and sisters died of consumption. The patient scarcely remembers having lost a day's work, though he has worked sometimes when not fit. For the past twenty years he has been subject to epigastric distress, usually coming on three or four hours after meals, most constant and severe after supper. This has modified his life in no way except slightly as regards diet and thus only during the past year. About a year ago he began to have occasional attacks of diarrhoea in the A.M. Gradually these attacks became more frequent, and he is now awaked nearly every A.M. by abdominal pain, after breakfast has several loose dejections, not very offensive, with much wind; but by noon has got through for the day. He has lost about 15 lbs. in the past year and much strength. His habits have been good except that tobacco and tea have been used to some excess. The pulse is 80, regular; the tongue slightly coated. He is spare, of fair color, with an arcus senilis and some arterial degeneration. Except for slight tenderness at the epigastrium physical examination is negative.

CASE 4. — A well-nourished colored girl of 16 lost her mother through "pneumonia" of three months duration. Two weeks before entering the M. G. H., having always been well previously, she lost appetite and began to suffer pain in the upper part of the abdomen, shooting up into the chest. The belly began to swell. There was dyspnoea, but no orthopnoea; at times palpitation; no cough; no chill; bowels and catamenia regular. On entrance the pulse was 110, resp. 30, temp. 100.4°; the tongue was slightly coated. The heart's impulse was in the fourth space just inside the nipple. At the apex there was a soft systolic murmur, and the pulmonary second was sharply accentuated. The skin of the abdomen was tense, the abdomen distended, its dependent portions flat, and fluctuation was marked. The urine was scanty, high colored, acid, sp. gr. 1018, free from albumen. At the end of three weeks illness a dark yellow, clear fluid was removed by aspiration from the abdomen to the amount of six and one half pints. Three and a half weeks later an equal amount of fluid, clear, with a greenish tinge, sp. gr. 1020, containing at least $\frac{1}{2}\%$ albumen, was removed. An irregular solid mass with ill-defined outlines was now felt in the umbilical region. There was constant pyrexia, ranging 100–102° F. During the next five weeks there was some abdominal pain, though less than at the onset of the disease; the solid mass seemed to extend laterally with a small amount of ascitic fluid beneath it. The pelvis, which before had contained nothing unusual except a retroverted uterus tightly pressed down, as if by the ascites, was now pretty well filled by a solid mass; but on the whole the patient had gained strength.

GYNAECOLOGY. — Professor BAKER.

1. In what positions would you place the patient for an examination of the pelvic organs?
 2. Describe the semi-prone position, and state its advantages.
 3. Describe the proper method of conducting an examination of the pelvic organs; i. e. give the details of procedure, as to the preparation of the couch, light, clothing, fingers or hands used, and everything you can remember that would be important in such an examination.
 4. Give the differential diagnosis, from bi-manual examination, of anteversion, anteflexion, retroversion, and retroflexion.
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DISEASES OF CHILDREN. — Assistant Professor ROTCH.

1. What advice as to weaning and feeding would you give in the case of an infant three months old, where the breast milk was gradually lessening in amount? [Time July 15 — mother strong and well; infant healthy, but not getting enough food.]
 2. The diagnosis and treatment of scarlet fever and measles, with the differential diagnosis between the two diseases when the efflorescence is not distinctive.
 3. Describe a case of chorea and give the appropriate treatment for the case you describe.
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MENTAL DISEASES. — Dr. FISHER.

1. Give a brief definition of insanity.
 2. Where is the lesion located in mental disease?
 3. What two grand divisions are made by the German system of classification?
 4. Mention some of the principal forms of insanity according to this system.
 5. What is paranœa?
 6. Describe briefly the course of general paralysis.
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Fourth Year's Studies.

GYNAECOLOGY. — Professor BAKER.

1. What accidents of labor may occur, that subsequently influence the establishment of disease of the pelvic organs?
2. Does care during the puerperium have any effect in preventing uterine disease? and if so, what should be the care of the patient during this period, and what are the diseases from which the physician should strive to guard her?
3. State what is understood by the "bi-manual method of examining the pelvic organs."

4. How would you differentiate a case of anteflexion of the cervix uteri, from one of retroversion of the uterus?
5. Give the principal indications for tamponing the vagina and uterus, and the method.

LARYNGOLOGY. — Professor KNIGHT.

1. Give the more common causes of mouth-breathing in the adult, and the operative measures for its relief. What is the most common cause in young children, and its relief?
2. Give the most common causes of a very offensive discharge from one nostril, and the treatment of those which occur to you.
3. What is the most frequent benign neoplasm in the larynx? the most frequent malignant? Under what circumstances would an operation on a malignant growth in the larynx be justifiable, and what operation offers the best chance of success?
4. Differential diagnosis between tubercular and syphilitic ulceration of the larynx. Treatment of each.
5. Laryngoscopic appearances in a case of "nervous aphonia." Treatment.
6. Describe the normal laryngoscopic and rhinacopic images.

OTOLOGY. — Professors BLAKE and GREEN.

1. Give the anatomical relationships of the external auditory canal.
2. What are the symptoms in a case of acute suppurative inflammation of the middle ear with implication of the mastoid cells?
3. What are the functions of the semicircular canals?
4. What are the objective and subjective symptoms of a fluid accumulation in the middle ear.

OPHTHALMOLOGY. — Professor H. W. WILLIAMS.

1. Describe some common forms of conjunctivitis.
2. What symptoms indicate paralysis of motor nerves of the eyeball?
3. What are the marked symptoms in iritis?
4. What refractive conditions require relief by the aid of convex glasses?
5. Describe, and state the diagnostic importance, of one or more of the changes disclosed at the fundus of the eye by the ophthalmoscope.

LEGAL MEDICINE. — Professor DRAPER.

1. Describe the "guaiacum test" for blood in a suspected stain.
2. What is a *corpus luteum* and of what value is it in Legal Medicine?
3. How are wounds classified for the purposes of Medical Jurisprudence?

4. What tests would you apply to distinguish real from apparent death; and what, in your opinion, is their relative value?

5. Describe the changes that occur in the fœtal circulation immediately after birth and, progressively, during the first five days thereafter.

6. What lesions are found in the subcutaneous tissues of the neck in cases of death by hanging?

CLINICAL OBSTETRICS. — Professor W. L. RICHARDSON.

1. What points should be noted in your inspection of the child before you inform the family that it is perfectly developed?

2. Enumerate the symptoms which would lead you to expect an attack of eclampsia in a woman eight months pregnant. Outline the prescriptions or directions which you would give in such a case at your first visit.

3. A multipara, near full term, sends for you as she has had pain for six hours. On examination the head is felt presenting high up. The cervix would easily admit three fingers. If she is in labor, you wish to telegraph for her husband. How would you determine this point?

4. A woman has passed through a normal labor and is making a normal convalescence. On the eighth day she begins to flow freely, and to complain of uterine pains. Diagnosis? Treatment?

5. Phlegmasia dolens. Symptoms? Treatment?

6. A normal labor is followed by a normal convalescence. During the fourth week of the convalescence the baby dies suddenly. How would you treat the breasts?

7. During nursing one of the nipples becomes ulcerated. Treatment?

8. Treatment of a sub-acute cystitis following pregnancy?

OPERATIVE OBSTETRICS. — Professor W. L. RICHARDSON.

1. A multipara has been in labor two days. The membranes have long since ruptured, and a contraction ring is felt four inches above the symphysis pubis. The os is fully dilated. The position is Sc. L. A. The right hand hangs without the vulva. The fœtal heart has not been heard for three hours. Treatment?

2. In what presentations and positions does the short forceps find its most appropriate use?

3. A primipara is in the second stage of labor. The head is within the pelvic cavity. The position is O. D. P. The brow presents. Immediate delivery is indicated. Treatment?

4. What are the difficulties and dangers of the high forceps operation? How may they be lessened?

5. A multipara has had moderate pains for several hours, when the membranes rupture suddenly in the absence of pains. Examination, half an hour later, shows a hand presenting high up, the os the size of a silver dollar, and a coil of the cord in the vagina pulsating feebly. Treatment?

OPERATIVE SURGERY. — Professor PORTER

1. Describe the operation of excision of the knee-joint.
2. Describe excision of the rib for necrosis.
3. Describe amputation of thigh by circular method.
4. Describe supra-pubic cystotomy.
5. Describe ligature of brachial artery at elbow.
6. Describe ligature of common carotid.
7. Describe ligature of dorsalis pedis.
8. Describe the operation of castration.

ADMISSION EXAMINATION PAPERS.

LATIN.

TRANSLATE : —

Scipio Nasica quum ad poëtam Ennium venisset, ei que, ab ostio quaerenti Ennium, ancilla dixisset, domi non esse; Nasica sensit, illum domini jussu dixisse, et illum intus esse. Paucis post diebus quum ad Nasicam venisset Ennius, et quum a januâ quaereret, exclamat Nasica, se domi non esse. Tum Ennius: quid, inquit, ego non cognosco vocem tuam? Hic Nasica: Homo es impudens; ego quum quaerem, ancillae tuae credidi, te domi non esse; tu mihi non credis ipsi.

FRENCH.

TRANSLATE : —

I. Par une belle journée d'été, je cheminai, le baton de voyage à la main, le long d'une des chaussées, qui, d'Anvers, se dirigent vers la Campène. J'étais las¹ de rêver et de jouir du spectacle de la nature; car la longue route avait fatigué mes membres, et la chaleur étouffante avait émoussé² la sensibilité de mon cerveau.

Ce fut avec une véritable satisfaction que j'entendais derrière moi le bruit lointain de roues, et que je distinguai, dans un nuage de poussière, la gigantesque masse noire qui m'annonçait l'arrivée de la diligence.

Lorsque la lourde voiture s'approcha enfin de l'endroit où je me trouvais, je fis un signe au conducteur, qui de loin, m'avait déjà envoyé un salut amical, comme à une vieille connaissance.

Il arrêta ses chevaux, ouvrit la diligence et répondit à mon question télégraphique.

— Il y a encore place dans le coupé. Où allons nous par ce temps étouffant?

— Descendez-moi au chemin de Bodeghem.

— Bien, Monseieur. En route!

Je soutai dans la diligence, et, avant que je fusse assis, les chevaux avaient repris leur trot cadencé.

Il n'y avait qu'un voyageur dans le coupé; un vieillard à cheveux gris qui avait répondu à mon salut par un "bonjour, monsieur," prononcé à voix basse, presque sans me regarder, en semblait peu porté à la conversation.

¹ *I was tired.* ² *blunted.*

II. Write a few lines in French descriptive of any familiar object, or scene.

GERMAN.

TRANSLATE (into idiomatic English) : —

Ich las von einem berühmten Philosophen, es sei einer der Hauptgrundsätze seiner Lehre: Alles was ist, ist gut. Ob es wahr ist — nicht der Satz, sondern dass er so aufgestellt worden — weiss ich nicht. Ich kenne die Schriften jenes Philosophen nicht, ich lese nie philosophische Bücher, mein Kopf ist zu schwach, er verträgt sie nicht. Ein deutsches philosophisches System kommt mir vor wie ein Getreidefeld, zu dem man uns hinführt und uns freundlich einladet uns satt zu essen; doch wäre es artiger uns gebackenes Brod vorzusetzen.

PHYSICS.

1. What is friction? Define the coefficient of friction.
2. Prove that a fluid buoys up a solid immersed in it with a force equal to the weight of fluid displaced.
3. Define energy. What are the various forms of energy?
4. Prove that the surface of a liquid in an open vessel must be horizontal.
5. What is meant by the amplitude of a vibration?
6. What determines the pitch of a note?
7. What is meant by a virtual image?
8. Explain the mirage.
9. Describe the different forms of lenses in common use.
10. Give examples of the conversion of the energy of electricity in motion.

GEOMETRY.

1. Two triangles are similar when their homologous sides are proportional.
2. The straight line joining the middle points of two sides of a triangle is parallel to the third side and equal to half of it.
3. In the same, or in equal, circles the less of two chords is at the greater distance from the centre.
4. Two regular polygons of the same number of sides are similar.
5. Define a circle; a trapezoid; an arc; a parallelogram; a line.

ALGEBRA.

1. Solve $\frac{x}{a-b} = \frac{a}{x-b}$.
2. In the following equations find the values of x and y .
 $x^2 + y = 71.$ $x + y^2 = 57.$

3. Reduce to its lowest terms

$$\frac{4x^2 + 3x - 10}{4x^3 + 7x^2 - 3x - 15}.$$

4. Simplify $\frac{1}{1 + \frac{1}{1 + \frac{1}{x}}}$

COURSES AT THE MEDICAL SCHOOL.

During the summer of 1889, courses, chiefly clinical, were given by the instructors of the School to graduates and advanced students. A list of these courses is given on pp. 370, 371.

STUDENTS.

Ames, John Lincoln, A.B. 1887,	Cambridge.
Baird, Julian William, A.M., PH.C. (<i>Univ. of Mich.</i>) 1883,	Boston.
Bartol, John Washburn, A.B. 1887,	Laneaster.
Brooks, William Allen, A.B. 1887,	Haverhill.
Bustille, Antonio, A.B. (<i>Inst. of Santander</i>),	Boston.
Churchill, Frank Spooner, A.B. 1886,	Milton.
Cogeshall, Frederiek, A.B. 1886,	Cambridge.
Coolidge, Frederick Shurtleff, A.B. 1887,	Boston.
Crooker, George Hazard, A.B. (<i>Brown Univ.</i>) 1887,	Providence, R. I.
Cutler, Edward Rowland, M.D. 1863,	Waltham.
Deal, George Francis,	E. Boston.
Dwight, Edwin Welles,	Auburndale.
Fitz, George Wells,	Peconie, N. Y.
Haskell, C. N., M.D.	Burlington, Vt.
Hoover, Charles Frank, A.B. 1887,	Miamisburgh, O.
Houghton, Silas Arnold, A.B. 1887,	Charlestown.
Keleher, Francis Joseph, A.B. (<i>Boston Coll.</i>), 1886,	Boston.
Kenefick, Joseph Aloysius,	Lawrence.
Knight, Augustus Smith, A.B. 1887,	Manchester.
McCreery, George, <i>Asst. Surg. U. S. Army.</i>	
Maekenzie, John Milne, A.B. (<i>Brown Univ.</i>) 1876, A.M. (<i>Ibid.</i>) 1879,	Fall River.
McLennan, Roderick, M.D.	So. Quincy.
Morse, John Lovett, A.B. 1887,	Taunton.
Nickerson, George Wheaton, M.D.	Stoneham.
Palmer, Franklin Sawyer, A.B. 1886,	Boston.
Parsons, Ralph Alfred, M.D.	W. Roxbury.
Proctor, Frank Ingersoll, A.B. 1887,	Boston.
Robinson, Thomas Johns, A.B. 1887,	E. Taunton.
Simpson, James Edwin,	E. Boston.
Smith, William Lord, A.B. 1886,	Boston.
Staekpole, F. D., M.D.,	Roxbury.
Welch, Edward J., A.B. (<i>Holy Cross Coll.</i>) 1887,	Billerica.

The courses will be repeated during the summer of 1890.

For particulars, address *The Secretary, Harvard Medical School, Boston, Mass.*

Subject.	Instructor.	Place.	Begin- ing.	Days.	Hour.	Weeks.	Fees. \$
Clinical Medicine	Prof. R. H. Fitz	Mass. Gen. Hosp.	July 1	Mo. We. Fr.	9	6	20.00
Clinical Medicine	Dr. C. F. Withington	City Hosp.	Sept. 2	Mo. Th. Sat.	10.30	4	15.00
Physical Diagnosis	Dr. C. F. Withington	City Hosp.	Aug. 5	Mo. Th. Sat.	10.30	4	15.00
Physical Diagnosis of Thoracic and Abdominal Diseases	Dr. E. G. Cutler	Mass. Gen. Hosp.	July 3	Mo. We. Fr.	10	6	20.00
Clinical Instruction in Nervous Diseases	Dr. G. L. Walton	Mass. Gen. Hosp.	July 1	Mo. We. Fr.	10	4	20.00
Mental Diseases	Dr. T. W. Fisher	Bost. Lunatic Hosp., So. Boston.	Aug. 5	Tu. Th. Sat.	3	4	15.00
Mental Diseases	Dr. Edw. Cowles	McLean Asylum	Sept. 2	Mo. Th. Fr.	3	4	15.00
Children's Diseases	Dr. E. M. Buckingham	Children's Hosp.	July 1	Mo. Th. Sat.	10.30	4	15.00
Laryngology and Rhinology	Dr. F. H. Hooper	City Hosp.	June 4	Tu. Th. Sat.	10	6	20.00
Syphilis	Dr. A. Post	Boston Dispensary	Sept. 2	Mo. We. Fr.	10.30	4	15.00
Skin Diseases and Syphilis	Dr. G. H. Tilden	City Hosp.	July 1	Mo. We. Fr.	11	6	20.00
Minor Surgical Gynecology	Dr. C. P. Strong	Free Hospital for Women, 60 East Springfield St.	July 2	Tu. Fr.	4-6	3	20.00
			July 23	Tu. Fr.	4-6	3	20.00
Physical Examination of Women	Dr. G. M. Garland	Mass. Gen. Hospital	July 1	Daily	9.30-11.30	4	20.00
			Aug. 1	Daily	9.30-11.30	4	20.00
Otology	Prof. J. O. Green	Eye and Ear Infirmary	July 9	Tu. We. Th. Fr.	9-11	3	25.00
Otology	Prof. C. J. Blake	Eye and Ear Infirmary	Sept. 9	Mo. Tu. Th. Fr.	10	3	25.00

Clinical and Operative Surgery	Assist. Prof. M. H. Richardson	Mass. Gen. Hosp.	July 2 Aug. 20	Tu. We. Th. Sat. Tu. We. Th. Sat.	11 11	6 6	25.00 25.00
Clinical and Operative Surgery	Dr. H. L. Burrell	City Hosp.	Aug. 3 Sept. 3	Tu. Th. Sat. Tu. Th. Sat.	11-12 11-12	4 4	20.00 20.00
Clinical Surgery (limited to 5)	Dr. S. J. Mixter	Carney Hosp.	July 2 Aug. 13	Tu. Th. Tu. Th.	8.30 8.30	6 6	20.00 20.00
Minor Surgery	Dr. S. J. Mixter	Mass. Gen. Hosp.	July 1 Aug. 12	Mo. We. Fr. Mo. We. Fr.	10 10	6 6	25.00 25.00
Surgery with special reference to Genito-urinary Surgery	Dr. A. T. Cabot	Mass. Gen. Hosp.	July 1 Aug. 19	Mo. We. Th. Sat. Mo. We. Th. Sat.	11 11	6 6	25.00 25.00
Genito-urinary Surgery	Dr. F. S. Watson	City Hosp.	June 1	Tu. Th. Sat.	11	6	25.00
Surgical Landmarks	Dr. G. H. Monks	Boston Dispensary	June 19 July 3	Mo. We. Fr. Mo. We. Fr.	11 11	2 2	10.00 10.00
Obstetrics	Dr. C. M. Green Dr. Edw. Reynolds Dr. C. W. Townsend		June 1 Aug. 1			8 8	30.00 30.00
Operative Obstetrics	Dr. Edw. Reynolds	Medical School	July 8	Daily	3.30-5.30	2	20.00
Operative Obstetrics	Dr. C. W. Townsend	Medical School	Aug. 5	Daily	3.30-5.30	2	20.00
Legal Medicine	Assist. Prof. F. W. Draper	Medical School	July 1	Mo. We. Fr. Sat.	9	4	20.00
Hygiene	Dr. S. H. Durgin	Medical School and elsewhere	July 1	Mo. We. Fr.	3-5	4	20.00
Hygiene	Dr. Chas. Harrington	Medical School and elsewhere	July 1	Daily		6	30.00
Bacteriology	Dr. H. C. Ernst	Medical School	June 1	Daily		6	30.00
Urinary Examination	Assist. Prof. W. B. Hills	Medical School	July 1	Daily	10-4	6	30.00
Qualitative Analysis	Assist. Prof. W. B. Hills	Medical School	July 1	Daily	10-4	6	30.00







